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ABSTRACT

This bibliography represents a tentative, subjective judgment of the literature relevant to the future of American education. The sccpe covers how and why we look at the future, what is happening now, and what might and ought to happen in the future. The material is organized into five sections: (1) introduction, (2) highly recommended reading list, (3) selected bibliography, (4) author, organization, and subject indexes, and (5) evaluation questionnaire for feedback purposes. Items are arranged in a logical sequence, rather than alphabetically, by methodology, trends, descriptive futures, new directions, and alternatives and reforms. (Author/MLF)

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Essential Reading for the Future of Education

A Selected and Critically Annotated Bibliography

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ESSENTIAL READING FOR THE FUTURE OF EDUCATION

A Selected and Critically Annotated Bibliography

Compiled

by

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September 1970

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ESSENTIAL READING FOR THE FUTURE OF EDUCATION

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I. Introduction

This selected bibliography represents a very tentative and subjective judgment of the literature that is most relevant to the future of American education. It covers an immense area, including futures methodology, trends, and possible directions (or alternative futures) that are being increasingly prescribed from all quarters. Or, to define the scope in four very basic questions: a) How and why do we look at the future? b) What is happening? c) What might happen? d) What ought to happen?

Such a scope may seem incredibly broad to one who is accustomed to a specialist's niche. But as our society becomes more complex, and linkages more diverse, it becomes conceptually necessary to develop holistic viewpoints. This is especially so for the rapidly emerging field of educational policy research, and this bibliography attempt to broadly sketch the parameters of the field, not only for the specialists and generalists within the field, but for the diversity of "outsiders" who will hopefully be aided in policy-making, as well as research and teaching.

A. The Three-Tier Bibliography

The "cream" presented here is part of a larger effort (see item 146) to upgrade previous work,[1] with the following rationale: Simple listing of titles can be helpful, and doubly so if well-categorized. A line or two of explanatory annotation can perhaps double the value, and a paragraph of intelligent annotation can double the value once more. The value is perhaps doubled again if the annotation is critical, pointing out virtues and faults of the document at hand.

The exploration of the literature has thus proceeded with the ideal of critical annotation in mind. But the product falls considerably short of this ideal: many of the critical comments are superficial, and it has often been the case that there has been no capacity to make any comment. Even the "objective" annotations vary in length and quality, and it has occasionally been necessary to paraphrase reviews or cite publisher's advertisements as a temporary annotation.

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1. MARIEN, Michael. Shaping the Future of American Education: A Preliminary Annotated Bibliography of Educational and General Futures. Syracuse: EPRC, May 1969, 101 pp. Supplement, August 1969, 34 pp.

Approaching the level of 1000 items (nearly all of them books or book-length documents) it becomes apparent that the bibliography was becoming unwieldy. Many of the items were considered obsolete to some degree and probably of interest only to those who study what Armytage (item 4) has called "Yesterday's Tomorrows." Or they attend to minute areas and are therefore of interest to highly select audiences.

In an attempt to separate wheat from chaff, I attempted to select 50 to 100 items that would be of immediate interest to most readers. Yet, even with many painful choices (see discussion of cautions below) the resulting bibliography has swelled to 146 items. To those who are already familiar with the literature of educational policy, this selection may still be overly narrow. But to others who are not as familiar with the field, this "essential reading" may appear overwhelming.

A further selection has therefore been made of a dozen "highly recommended" items. This will hopefully be valuable for those who wish to have a starting point in the consideration of the future of education. For those who are already familiar with the literature, the list may merely serve as an interesting indicator of this compiler's preferences.

A "three-tier bibliography" has therefore emerged, with about 1% highly recommended for immediate reading, 10-15% considered as essential reading, and the remainder constituting the full bibliography (see item 146) or the base of the pyramid. It is felt that an information system such as this is particularly suited to a broad and rapidly emerging area of critical concern, where knowledge must be diffused widely and quickly. It is assumed that every reader of this bibliography is inundated by the information explosion. The necessary response to this system overload is to establish priorities and to develop holistic frameworks so that more information can be meaningfully accommodated. The two upper tiers of the broader bibliography, represented here, attempt to do this: to suggest priorities and to point out the holistic literature that may facilitate a broader understanding. (The irony, of course, is that this bibliography contributes to information overload, not only as another document to read, but through its urging of still more reading.)

B. Cautions

Although the idea of a three-tier bibliography may be theoretically appealing, it is essential that the limitations to this initial effort be kept in mind. This is strictly a one-man project, with all the advantages and drawbacks that such an effort entails. The cautions should therefore be made explicit:

1. Ignorance. Although there is an awareness of about 1000 documents that are considered to be relevant, the universe has by no means been covered, especially with respect to journal articles.

2. Inconsistency. The literature has been considered in varying degrees, from a thorough reading, to a quick skimming, to a glance at the table of contents or the book jacket, to simply a knowledge that an item exists. Moreover, a document read a year ago may not be judged in the same light as one read at the present. Consequently, the full bibliography may contain many items that, if fully considered, would merit promotion to one of the upper tiers, perhaps replacing some of the literature that is suggested.

3. Bias. Any selection exhibits a bias, whether or not one wishes to admit it. In general, a preference has been shown here for competent but imaginative scholarship, as opposed to romantic polemics on the one hand, and on the other hand, timid but "respectable" works that are divorced from what is considered as emerging realities. If this particular selection is found to be slanted, it might at least stimulate a counter-bibliography.

4. Obsolescence. In that almost 60% of this selected bibliography involves items published in 1969 or 1970 (with more than 90% published between 1967 and 1970), there can be little doubt that there is a considerable amount of "essential reading" that is presently in galley proofs or typewriter carriages. If subsequent bibliographies are issued, say on an annual basis, one can anticipate that one-fourth to one-third of the items will be new publications. If such a selected bibliography can be taken as a rough approximation of the field of educational futures research, then it must be concluded that the knowledge obsolescence rate in this field is considerably higher than elsewhere. (In engineering, for example, it is commonly stated that 50% of the relevant knowledge becomes obsolete over the period of a decade.)

Despite these cautions, a start must be made. As pointed out by Drucker (item 36) and Platt (item 113), we are entering an era in which priorities in knowledge must be established, not only because of the ever-growing quantity, but even more so because of pervasive social problems requiring knowledge for their solution. It is hoped that this selected bibliography will

stimulate the reader's thinking about policy priorities, as well as priorities in research and teaching. Indeed, one might confront the painful question as to whether this literature (or any such approximation of "essential reading") enters the curriculum of schools and colleges in any manner. If not, in an age when many students are flailing about for "relevance," can there be little wonder that many resort to drugs, disruption, and dropping out?

C. The Need for Feedback

An enterprise such as this could continue as a closed system and perhaps remain of some value. But because of the exceptionally broad scope of coverage and the rapidly growing body of literature, help from many quarters is required if subsequent efforts are to go beyond superficiality. Therefore, if you benefit from using this bibliography, please have the courtesy to return the feedback form so that others may benefit from your comments. An ideal document of this kind would ultimately be able to partially overcome the 1-2 year publishing lag by anticipatory citation of essential reading in the galley proof or rough draft stage--in other words, a broader dissemination of "insider's knowledge."

D. The Classification of Items

The citations in both the highly recommended list and the selected bibliography are not arranged alphabetically, which is considered to be an arbitrary form of classification. Its only benefit--that of convenience--is easily provided for by the author index supplied here. Rather, there has been an attempt at "heuristic juxtaposition," arranging items so that there is some logical flow or clashing contrast, so that a group of, say, five or six documents may be compared together. Although this has been attempted, there are many cases where there is little or no relationship, and the user is therefore cautioned against reading too much meaning into the arrangement, which in some cases is arbitrary. In general, the attempt has been to lead from the broad to the narrow, the new to the old, and the more valuable to the less valuable.

The categories have attempted to distinguish between methodology, trends, descriptive futures, and prescriptive futures. Although the literature

has been placed in these categories, there is nevertheless a considerable overlap, and it is not uncommon to find a book discussing methodology, supplying evidence of trends, extrapolating into the future or suggesting several possible futures, and making a judgment as to what the future ought to be like (e.g., Johnson, item 85). Indeed, many ostensibly descriptive futures are to some degree an "objective" mask for the future that is preferred by the author (e.g., Beckwith, item 25). Items have been classified under the category that they most strongly suggest, although a more thorough analysis could warrant a re-classification, e.g. from prescriptive to descriptive. The literature of trends and descriptive futures has been found to be similar enough to warrant a joint category, as distinguished from two separate categories in the previous bibliography.

II. The Highly Recommended List

The list of ten books and two articles on the following page is highly recommended to all readers, regardless of one's special interests. Most of these items, arranged in a somewhat logical sequence, are not about the long-range future but concern the present and the immediate future. Although there is an overlap, each of these syntheses provides a distinctive approach to explaining what is happening in our society. There is an important similarity to the images of The Unprepared Society, The Age of Discontinuity, Super-Industrial Society, The Temporary Society, Prefigurative Culture, Noetic Society, and Planetary Society. Viewed together, it is hoped that the reader will develop a better understanding of world and national problems, and the dramatic shifts underway in our social structure.

Explicitly or implicitly, each of these authors deals with massive learning needs, not only for upcoming generations but for our entire society. The necessary accommodation by educating institutions will not be pleasant, but may be preferable to the alternatives of new institutions to facilitate learning or the obliteration of global mankind. We can continue to educate for yesterday and ignore those "educated" yesterday only at our peril.

Highly Recommended

(The number before each citation indicates placement in the selected bibliography, where there is a more extensive annotation.)

(1) MICHAEL, Donald N. The Unprepared Society: Planning for a Precarious Future.(1968, 132 pp.). Discusses the need for looking at the future, and consequent challenges for educators.

(33) TOFFLER, Alvin. Future Shock. (1970, 505 pp.). Problems of individual adaptation resulting from increasing transience, novelty, and diversity in a super-industrial society.

(36) DRUCKER, Peter F. The Age of Discontinuity: Guidelines to Our Changing Society. (1969, 383 pp.). Focuses on new technologies, the world economy, large organizations, and the knowledge society.

(34) BENNIS, Warren G. and Philip E. SLATER. The Temporary Society. (1968, 147 pp.). Changes in democracy, family, bureaucracy, and leadership, with recommendations for education.

(66) MEAD, Margaret. Culture and Commitment: A Study of the Generation Gap. (1970, 113 pp.). On the unique shift to a Prefigurative Culture, where the past is no longer a guide to the future.

(64) CARROLL, James D., "Noetic Authority," Public Administration Review, 29:5, Sept-Oct 1969, pp. 492-500. The shift of an increasingly complex society to a mental base of operations and a collegial form of authority.

(32) FERKISS, Victor C. Technological Man: The Myth and the Reality. (1969, 352 pp.). Points out the direction in which mankind must go if it is to survive the new challenges of technological change.

(68) COOMBS, Philip H. The World Educational Crisis: A Systems Analysis. (1968, 241 pp.). Worldwide trends and problems in education, with focus on demand outstripping capacity.

(22) McHALE, John. The Future of the Future. (1969, 322 pp.). Ecology, resources, and technology in the context of the emerging planetary society.

(20) BRZEZINSKI, Zbigniew. Between Two Ages: America's Role in the Technetronic Era. (1970, 334 pp.). Analyzes "The Third American Revolution," the world leadership of the U. S., and the stagnant future of the Soviet Union.

(19) SNOW, C. P. The State of the Siege. (1969, 50 pp.). A pessimistic view of our present malaise and future food and population problems.

(113) PLATT, John. "What We Must Do," Science, 166: November 28, 1969, pp. 1115-1121. Priority listing of major problem areas and estimated time to crisis, broken down by three periods in the future.

III. Selected Bibliography

A. METHODOLOGY

1. Background to Contemporary Futures Studies

1. MICHAEL, Donald N. The Unprepared Society: Planning for a Precarious Future. Foreword by Ward Madden. The John Dewey Society Lecture--No. Ten. N.Y.: Basic Books, 1968. 132 pp. $4.95.

   An excellent introduction to explaining the need for looking at the future, who does it, how it is done, and problems encountered. The final chapter, "Some Challenges for Educators," discusses implications for education, e.g.: "We must educate so people can cope efficiently, imaginatively, and perceptively with information overload." (p. 108).

2. DROR, Yehezkel. Public Policy-Making Re-examined. San Francisco: Chandler, 1968. 370 pp.

   An authoritative work discussing contemporary policy-making and proposing an optimal model characterized by rational and extrarational components. See Chapter 17, "Changes Needed in Knowledge," (and especially notes on policy science, pp. 240-245); also discussion in Chapter 19 on organizations for policy analysis. Excellent biographic essay, pp. 327-356.

3. MARTY, Martin E. The Search for a Usable Future. N.Y.: Harper & Row, 1969. 157 pp.

   An eminent theologian reviews contemporary thinking among futurists and theologians, and argues "for an approach which retains the ambiguity of history and yet which motivates action and prevents paralysis" (p. 73)--a future with hope. "The sense of a useless past . . . is not to take a nihilist's view of historical life but rather to point to the creative possibilities of the moment." (p. 12) The volume goes on to point out how various approaches to the future of man and society affect the actions of people.

4. ARMYTAGE, W. H. G. Yesterday's Tomorrows: A Historical Survey of Future Societies. Toronto: University of Toronto Press, 1968. 288 pp.

   "The rise of . . . 'conflict models' of prediction out of what might otherwise be regarded as a welter of futuristic fantasies is the theme of this book. It tries to show how, out of the long process of preparatory daydreams, imagined encounters, wish-fulfillments, and compensatory projections, a constructive debate about tomorrow is emerging, providing us with operational models about what tomorrow could, or should be. This debate (dialogue is perhaps the more fashionable term) is increasingly becoming part of the modern self whereby man is enabled to maintain his equilibrium." (p. x) An excellent survey not only of Utopian literature, but of modern scientific efforts. Although no attempt is made at an orderly bibliographic presentation, about 500 titles are mentioned in the notes (pp. 222-265), and several hundred additional titles are sprinkled throughout the text. (For a chronological listing of about 550 Utopian writings, see Miriam Strauss Weiss, A Lively Corpse. Cranbury, N.J.: A.S. Barnes, 1969).

2. General Futures

5. DE JOUVENEL, Bertrand. The Art of Conjecture. Translated from the French by Nikita Lary. N.Y.: Basic Books, 1967. 307 pp. (First published by Editions du Rocher in 1964).

   An authoritative discussion of "the customs of the mind in its commerce with the future," covering predictions, ways of conceiving the future, and quantitative predictions. The last chapter advocates "a surmising forum" as "a necessary response to a growing demand for forecasts."

6. International Social Science Journal, 21:4, 1969. Special Issue on Futurology.

   6 of the 8 articles discuss methodology and problems of forecasting.

7. JANTSCH, Erich. Technological Forecasting in Perspective. Paris: Organization for Economic Co-Operation and Development (OECD), 1967. 401 pp.

   Extensive discussion of a framework for technological forecasting and related techniques. Of even greater importance are the two annexes. Annex A lists "Technological Forecasting Activities in Non-Industrial Environments," including 17 forecasting institutes and consulting firms (13 American), military and national planning in various nations, and forerunner activities in look-out institutions (9 of 13 listed are American). Annex B contains an annotated bibliography of about 420 items divided into 14 categories. Despite comprehensiveness in the area of scientific and technological forecasting, there is no mention of writings on educational futures or of organizations listed having such a concern. (For a more current listing of American researchers, see McHale, item 145).

8. WEAVER, W. Timothy. The Delphi Method. Syracuse: Educational Policy Research Center, October 1970.

   A three-part report with an extensive analysis of the experimental research that has proceeded and accompanied the development of the Delphi method, and its use as a device for technological forecasting and educational forecasting. Many reservations are made, and it is concluded that "Although Delphi was originally intended as a forecasting tool, its more promising educational application seems to be in the following areas: (a) a method for studying the process of thinking about the future, (b) a pedagogical tool which forces people to think about the future, and (c) a planning tool which may aid in probing priorities held by members and constituencies of an organization."

9. ROCHBERG, Richard, Theodore J. GORDON, and Olaf HELMER. The Use of Cross-Impact Matrices for Forecasting and Planning. Middletown, Conn.: Institute for the Future, IFF Report R-10, April 1970. 63 pp.

   "A cross-impact matrix is an array consisting of a list of potential future developments and two kinds of data concerning these developments: first, the estimated probabilities that these developments will occur within some specified period in the future, and, second, estimates of the effect that the occurrence of any one of these events could be expected to have on the likelihood of occurrence of each of the others.

In general, the data for such a matrix are obtained by collating expert opinions derived through the use of methods such as the Delphi technique. Such a matrix is analyzed in order to revise the estimated possibilities of occurrence of each development in light of the expected cross impacts of other events on the list, (and to) discover how a change in the probability of occurrence of one or more events (by virtue of a technological breakthrough, a social change, a policy decision) might be expected to change the probabilities of occurrence of other events on the list." (p. 1)

The possible benefits of such an approach are the prompting of meaningful questions, serving pedagogical purposes, comparing the plausibility of scenarios, providing a predictive device in areas in which exact causal relationships are extremely difficult to discern, and providing a method of simulating certain policy actions. (p. 42)

This technical report of ongoing methodological development will probably be of interest only to specialists in forecasting. (Also see items 41 and 42 concerning IFF applications of the Delphi technique.)

10. BAIER, Kurt and Nicholas RESCHER (eds.). Values and the Future: The Impact of Technological Change on American Values. N.Y.: The Free Press, 1969. 527 pp. Bib., pp. 472-512.

17 essays aimed "toward the discovery of ways of guiding social change in directions which are at the least not incompatible with the realization of our deepest values, and perhaps even helpful to it." (p. v) Some groundwork is laid for a new profession of "value impact forecasters," especially via methodological pieces by Rescher, Gordon, and Helmer. The other essays are largely focused on economics, and the editors readily confess the weakness of excluding views by anthropologists, sociologists, and psychologists. There are two bibliographies: the first lists 300 uncategorized items on technological progress and future-oriented studies; the second offers about 500 categorized items on theory of value.

11. U. S. Congress. House Committee on Science and Astronautics. Technology: Processes of Assessment and Choice. Report of the National Academy of Sciences. Washington: USGPO, July 1969. 163 pp. 75 cents.

"Technology Assessment" describes "what occurs when the likely consequences of a technological development are explored and evaluated. (The) objective is . . . to foster a more constructive evolution of our technological order." (p. 3) This authoritative report includes chapters on existing processes of assessment and decision, formulation of objectives, problems and pitfalls, and approaches and recommendations. It is concluded that new assessment mechanisms are needed with a broader and less self-interested viewpoint. To this end, "the panel urges the creation of a constellation of organizations, with components located strategically within both political branches, that can create a focus and a forum for responsible technology-assessment activities throughout government and the private sector . . . such organizations must be separated scrupulously from any responsibility for promoting or regulating technological applications . . ." (p. 117)

12. U. S. Congress. House Committee on Science and Astronautics. A Study of Technology Assessment. Report of the Committee on Public Engineering Policy, National Academy of Engineering. Washington: USGPO, July 1969. 208 pp. $1.25.

A summary of findings and commentary about the concept and practice of technology and assessment, with three experiments and an analysis of the methodology employed. Of particular interest is the first experiment, Technology of Teaching Aids, where alternative strategies of using ETV and CAI in higher education and their impacts are explored. (pp. 37-76) Although these experiments are preliminary, they indicate the scope and direction of future efforts. It is concluded that technology assessments are feasible, and that they can help to alert the nation to future benefits and to future problems, if produced in an environment free from political influence or predetermined bias.

13. Educational Policy Research Center at Stanford. Toward Master Social Indicators. Menlo Park, Calif.: Stanford Research Institute, Research Memorandum EPRC 6747-2, Feb. 1969. 52 pp.

A discussion of social accounting, with particular emphasis on deriving master indicators (critical and aggregative indicators in hierarchical schema), relating indicators on individuals and social systems, and attaining "a comprehensive system of national social data capable of generating descriptive social reporting, projective social trending, and predictive social accounting." (p. 46)

3. Educational Futures

14. ZIEGLER, Warren L., with the assistance of Michael MARIEN. An Approach to the Futures-Perspective in American Education. Syracuse: Educational Policy Research Center, May 1970. 103 pp.

A synthesis of the attempts to define alternative educational futures in the U. S., discussing the idea itself and the various methodologies in the macrosystem context of the educating domain, or "the education complex" (which includes the "periphery" of adult education, suppliers to educating institutions, and organized beneficiaries--especially students). Five planning models are discussed: the future-as-the-present, the future-as-an-extrapolation-of-the-past, the single alternative future, the technological future, and the comprehensive future. Problems in the polity, in policy-formulation, and in planning are discussed, and the document is concluded with two critiques by outsiders.

15. Educational Policy Research Center at Syracuse. Notes on the Future of Education, D.J. Barclay (ed.), 1:3, Fall 1970. Special Issue on Methodology.

4 brief articles discussing problems of planning and policy, the limitations of the Delphi method as a forecasting tool and its applications as an educational device, econometric modeling explained to the layman, and macro-system forecasting (an exploratory paper suggesting a syncretic methodology combining general systems theory, social indicators, and forecasting in order to attain an overview of "the education complex").

16. HIRSCH, Werner Z. and Colleagues. Inventing Education for the Future. San Francisco: Chandler Publishing Co., 1967. 353 pp.

19 articles arising from the 1965-66 Educational Innovations Seminar at UCLA. Largely concerned with methodology of planning and future-casting, and methods of introducing change.

17. FURSE, Bernarr and Lyle O. WRIGHT (eds.). Comprehensive Planning in State Education Agencies: A 7-State Project. Salt Lake City: Utah State Board of Education, 1969.

A compendium of reports from seven states: Utah, Colorado, Texas, Iowa, West Virginia, Connecticut, and Puerto Rico, as developed under Section 505 of Title V, E.S.E.A.

18. MAYHEW, Lewis B. Long Range Planning for Higher Education. Studies in the Future of Higher Education, Report No. 3. N.Y.: Academy for Educational Development, May 1969. 221 pp.

An authoritative assessment of statewide coordination systems for higher education and resultant master plans, voluntary coordination, and long-range planning of individual institutions. "Only 10 states have no master plans, higher education studies with the attributes of a master plan, or definite activities designed to result either in a master plan or some form of coordinating agency." (p. 1) But, although "the movement towards planning seems inexorable" (p. 1), of the ten non-planning states, "all seem unlikely, for a wide variety of reasons, to produce master plans." (p. 101) There is a great similarity among the states that plan and the unquestioned assumptions that plans are based on. Mayhew aptly questions a number of these assumptions, but not in terms of alternative future states of society. Rather, in his final chapter on "The Future of American Higher Education," "the outlines of American society for 1980 are reasonably clear." (p. 172) Clarity is provided by extrapolation of various demographic trends, and a scenario of relatively little change in higher education.

B. TRENDS AND DESCRIPTIVE FUTURES

1. General

a. Global Overviews

19. SNOW, C. P. The State of Siege. The John Findley Green Foundation Lecture, Westminster College, November 1968. N.Y.: Charles Scribner's Sons, 1969. 50 pp.

This mini-book provides an excellent (albeit disturbing) introduction to future-study through a consciously pessimistic overview that juxtaposes the present world-wide malaise ("We are behaving as though we were in a state of siege") with critical future problems of population growth and famine. Although serious local famines will occur, a large-scale famine will not appear before 1980--but a major catastrophe is expected before the end of the century. To avoid this, population restriction and large-scale aid from the developed nations is required, but the eventuality of either is doubted. "To stint ourselves to avoid a disaster in twenty years--what body of poeple would even do it? Right." (p. 38) Three scenarios are offered, along with an assessment of their probable occurrence.

20. BRZEZINSKI, Zbignew. Between Two Ages: America's Role in the Technetronic Era. N.Y.: Viking Press, 1970. 334 pp. $7.95.

A broad perspective of global trends by a leading scholar of international relations. The U. S. is seen as the "principal disseminator of the technetronic revolution" (p. 24) and as "a society that is both a social pioneer and a guinea pig for mankind." (p. xv) ("Technetronic" has been coined by the author to connote the pervasive influence of technology and electronics.) Under these unprecedented conditions, there is an "age of volatile belief," leading to a worldwide condition of crumbling religions and ideologies. The Soviet Union is seen as steeped in "dull social and political orthodoxy," and, among five alternative paths for Soviet development (p. 164), the most probable short-term outcome is viewed as a balance between oligarchic petrifaction and technological adaptation. America is left to lead the way, despite problems with the New Left ("an essentially negative and obsolescent force"--p. 231) and doctrinaire liberals, and the future is optimistically seen as a combination of more social planning, participatory pluralism, rational humanism, and a community of the developed nations.

The distinguishing feature of "The Third American Revolution" that is creating three Americas in one (technetronic, industrial, and pre-industrial) is that it "simultaneously maximizes America's potential as it unmasks it obsolescence." Unfortunately, Brzezinski is overly preoccupied with "The New Left Reaction" and "The Crisis of Liberalism," (each meriting a full chapter), while failing to seriously address the problems of American obsolescence (which are teasingly mentioned in passing throughout the volume). Despite such imbalance, this volume should be important.

21. KAHN, Herman and Anthony J. WIENER. The Year 2000: A Framework for Speculation on the Next Thirty-Three Years. N.Y.: Macmillan, 1967. 431 pp.

A widely known and respected volume--perhaps inordinately so, considering the focus on international politics and the possibilities of nuclear war, with little or no mention of ecology, communications, transportation, education, and the global economy. Nevertheless, it is a modern classic (for the present, at least). Especially see the discussion of "The Basic, Long-Term Multifold Trend" (pp. 39-64), various scenarios, and the excellent final chapter on "Policy Research and Social Change."

22. MCHALE, John. The Future of the Future. N.Y.: George Braziller, 1969. 322 pp. $7.95.

A wide-ranging overview aided by scores of charts and photographs, with particular emphasis on ecology, technology, and planetary resources. Chapter 1 provides a good summation of future-study in the context of a transition toward a world-man image, and Chapter 5 continues with a discussion of individual futurists and organizations studying the future (a continuing interest of McHale). The final chapter discusses various aspects of the emerging planetary society, concluding that "we must understand and cooperate on a truly global scale, or we perish." (p. 300).

23. PECCEI, Aurelio. The Chasm Ahead. N.Y.: Macmillan, 1969. 297 pp.

An Italian industrial manager lucidly assesses the macroproblems of our time with particular emphasis on the growing cleavage across the Atlantic brought on by the technological gap. "The gap, in effect, is between the GM age and the IBM age." (p. 64) Although Americans criticize their education system, in world perspective it is seen as far ahead: "a solid case can be made for the claim that education supports the very underpinnings of the technological gap of the future." (p. 50) To facilitate "Global Dimensions to Our Thinking," a New Approach called Project 69 is proposed to serve as "a multinationally sponsored feasibility study on systematic, long-term planning of world scope." (p. 219)

24. WAGER, W. Warren. The City of Man: Prophecies of a World Civilization in Twentieth-Century Thought. Boston: Houghton-Mifflin, 1963. 310 pp. Bib., pp. 293-302.

A comprehensive, scholarly, and highly readible "biography" of the vision of cosmopolis throughout history, as it has appeared in the East and West, in ancient Greece and Rome, in the Middle Ages, and in the present. Prophetic thinkers using various approaches are analyzed: the biological approach of Huxley and Teilhard de Chardin, the historical approach of Toynbee and Sorokin, and the "lines and spirals" approach of Hocking, Jaspers, Mumford, and Kahler. In contrast to these independent thinkers, various doctrinaire views are explored. The prospects of synthesis in philosophy, religion, knowledge, government, culture, and economics are dealt with in separate chapters, with a brief consideration in the final chapters of what might happen after a world civilization is attained. Annotated bibliography of about 100 "recent books on world order."

25. BECKWITH, Burnham Putnam. The Next 500 Years: Scientific Predictions of Major Social Trends. Foreward by Daniel Bell. N.Y.: Exposition Press, 1967. 341 pp.

An imaginative, provocative, and comprehensive attempt to view the very long-range future. Simplistic views of education, ultimate world centralization, and scientization; but this "sleeper" volume should nevertheless be looked at for its vast array of mind-bending ideas.

b. National Overviews

26. U. S. Department of Health, Education, and Welfare. Toward a Social Report. Washington, USGPO, 1969. 101 pp. 55 cents.

The first attempt by the Federal Government to systematically measure the social well-being of the U. S. and an important preliminary step toward a regular system of social reporting. Seven areas have been selected for initial study with the aid of existing data: health and illness, social mobility, physical environment, income and poverty, public order and safety, participation and alienation, and learning, science, and art. In the latter category, it is tentatively concluded (on the basis of limited data) that children are learning more than in the past, but that we could do much better. It is pointed out that The

Digest of Educational Statistics "has virtually no information on how much children have learned" (the National Assessment of Educational Progress may soon supply some data to this end). A concluding appendix discusses "How can we do better social reporting in the future?", with comments on the deficiencies of existing statistics, the need for new social indicators, and the development of policy accounts (or meaningful integrations of social indicators).

27. GROSS, Bertram M. (ed.). Social Intelligence for America's Future: Explorations in Societal Problems. Boston: Allyn and Bacon, Inc., 1969.

A collection of authoritative articles on social indicators and the need for additional indicators. This volume is the hard cover marriage of the two volumes of The Annals of the American Academy of Political and Social Science entitled Social Goals and Indicators for American Society. (Vol. 371, May 1967; Vol. 373, September 1967.) Especially see Wilbur J. Cohen, "Education and Learning" (Annals, Vol. 373), which provides an excellent overview of education, introduces the concept of "the learning force," and points out the many areas where new educational indicators are needed.

28. SHELDON, Eleanor Bernert and Wilbert E. MOORE (eds.). Indicators of Social Change: Concepts and Measurements. N.Y.: Russell Sage Foundation, 1968.

An authoritative work by and for sociologists. Especially see Daniel Bell, "The Measurement of Knowledge and Technology" (pp. 145-246) and Beverly Duncan, "Trends in Output and Distribution of Schooling" (pp. 601-672, 32 tables). The Bell article, a far-ranging essay covering implications of knowledge growth in a post-industrial society, is especially recommended.

29. BELL, Daniel (ed.). Toward the Year 2000. Work in Progress. N.Y.: Houghton-Mifflin, 1968. 400 pp. Originally published by American Academy of Arts and Sciences in Daedalus, Summer 1967.

Deliberations of the Commission on the Year 2000. Five of the 22 articles involve education and education-related topics, while four others discuss futures methodology. Although well publicized, these essays do not appear to be especially superior to those of any other anthology on the future. But this is "Work in Progress," foreshadowing a series of 8 volumes that will appear over the next 2-3 years, starting with Harvey Perloff (ed.), U.S. Government in the Year 2000. Other volumes will cover Values and Rights (Fred C. Iklé), Intellectual Institutions (Stephen Graubard), The Life Cycle (Kai Erickson), The International System (Stanley Hoffman), The Social Impact of the Computer (Robert M. Fano), Science and Society (Franklin Long and Robert Morison), and Business Institutions (Martin Shubik). Some of the volumes will be by a single author, while others will include contributed papers and discussions.

30. GROSS, Bertram M. (ed.). A Great Society? Foreword by Stephen K. Bailey. N.Y.: Basic Books, 1968. 362 pp. $8.50.

An excellent anthology of 13 articles, 11 of which were presented during the 1965-66 Great Society Seminar at Syracuse University, in response to five questions submitted by President Johnson. Especially see articles on social change by Peter Drucker (new political alignments), Robin Williams (social rigidities), Daniel Bell (conceptual adequacy), and Norton Long (spiritual unemployment).

31. KOSTELANETZ, Richard (ed.). Beyond Left and Right: Radical Thought for Our Time. N.Y.: William Morrow, 1968. 436 pp. $7.95.

An excellent anthology that defines "radical" in the innovative sense, rather than the political sense. A good introduction to futures is provided through a provocative selection of articles by Boulding, Fuller, Kahn, Wiener, McLuhan, Bell, and others, as grouped in the categories of man and his future, technology and society, enterprise and remuneration, architecture, people and resources, education, defense, and redesigning society.

32. FERKISS, Victor C. Technological Man: The Myth and the Reality. N.Y.: George Braziller, 1969. 352 pp. Bib., pp. 295-327.

A political scientist looks at the vast changes transforming society and attacks "the myth of the future," which focuses attention on what is to come rather than what is. (pp. 10-16) He concludes that "Technological man is more myth than reality . . . Bourgeous man is still in the saddle . . . At the same time, an existential revolution is under way that may destroy the identity of the human race, make society unmanageable and render the planet literally uninhabitable. Bourgeous man is incapable of coping with this revolution. The race's only salvation is in the creation of technological man." (p. 245) To survive, a new philosophy is required, involving the new naturalism, the new holism, and the new immanentism. (p. 252)

Chapter 4, "The Prophets of the New" provides an excellent critique of prominent writers such as Ellul, McLuhan, Teilhard de Chardin, Skinner, Landers, and Marx. The unannotated bibliography lists about 500 books and 400 articles on technology, social change, and the future.

33. TOFFLER, Alvin. Future Shock. N.Y.: Random House, 1970. 505 pp. $8.95. Bib., pp. 461-483.

Future shock is the disease of change, "the dizzying disorientation brought on by the premature arrival of the future . . . culture shock in one's own society . . . the malaise, mass neurosis, irrationality, and free-floating violence already apparent in contemporary life are merely a foretaste of what may lie ahead unless we come to understand and treat this disease." (p. 13)

The sources come from increasing transience, novelty, and diversity. Transience involves the throw-away society, the new nomads (or the declining significance of place to human life), modular man (who has modular relationships with many, rather than holistic relationships with a few), the coming post-bureaucratic ad-hocracy, and the obsolescence of information. The novelty ratio (altering the relationship between the familiar and the unfamiliar) is growing, due to science, an economy geared to the provision of psychic gratification, and new family relationships. Diversity has led us to overchoice, a surfeit of subcults in the world of work and play, and a diversity of life styles enabling serial selves. This accelerating pace leads to serious psychological problems, and inappropriate psychological responses such as denial, specialism, obsessive reversion (both right-wing and left-wing) and super-simplifying.

Numerous strategies for survival are proposed for individuals (personal stability zones, crisis counseling, half-way houses, enclaves of the past, and enclaves of the future), technological control, social futurism (including comments on the collapse of technocratic planning and the need for social futures assemblies to salvage the system of representative politics) and education, which is seen as "a hopeless anachronism." Although education is admittedly undergoing rapid change, "much of this change is no more than an attempt to refine the existent machinery, making it ever more efficient in the pursuit of obsolete goals." (p. 359) Toffler advocates a Council of the Future in every school and community, provision for lifelong education, and developing common skills of learning, relating, and choosing while extending super-industrial diversity.

This challenging overview at times appears glib, especially with its zippy chapter headings and sub-headings. It is written for a broad audience, but backed up by considerable research, including a bibliography of 359 items. And it raises some very important questions.

34. BENNIS, Warren G. and Philip E. SLATER. The Temporary Society. N.Y.: Harper & Row, 1968. 147 pp.

Six separate essays by one or both of the authors "to force into view certain changes affecting vital aspects of our key institutions: organizational life, family life, interpersonal relationships, and authority." In the first essay, democracy is seen as inevitable--the necessary social system of the electronic era. In the second essay, Slater looks at change and the democratic family, noting that "experiential chasms between age cohorts serve to invalidate parental authority." (p. 24) The topics that follow concern the new style organizations beyond bureaucracy, social consequences of temporary systems, new patterns of leadership for adaptive organizations, and in the final chapter on the temporary society, the necessary education is prescribed for the art and science of being more fully human: how to get love, to love and to lose love; how to enter groups and leave them; how to attain satisfying roles; and how to cope more readily with ambiguity. "For the most part we learn the significant things informally and badly, having to unlearn them later on in life when the consequences are grave and frightfully expensive, like five-day-a-week analysis." (p. 127)

35. HAUSER, Philip M. "The Chaotic Society: Product of the Social Morphological Revolution," American Sociological Review, 34:1, February 1969. pp. 1-19. Based on Presidential Address, American Sociological Association annual meeting, August 28, 1968.

Contemporary society "is realistically characterized as 'the chaotic society' and best understood as 'the anachronistic society.'" (p. 1) The cause of the contemporary chaos is seen as "the social morphological revolution," which consists of increased size, density, heterogeneity, and tempo of change.

36. DRUCKER, Peter F. The Age of Discontinuity: Guidelines to Our Changing Society. N.Y.: Harper and Row, 1969.

An important book focusing on four major discontinuities: new technologies, the world economy (including a chapter on "The Global Shopping Center"), a society of large organizations (including a chapter on "The New Pluralism"), and the changed position and power of knowledge such that we are becoming a knowledge society--"the greatest of the discontinuities around us." This final section on knowledge (Chapters 12-17) is of immense importance to educators.

Drucker forecasts that the knowledge industries will account for one-half of the total national product in the late 1970's (p. 263), and argues that knowledge, rather than agriculture and mining, has now become the primary industry supplying the essential and central resource of production. Under these circumstances, "It is not that we cannot afford the high costs of education; we cannot afford its low productivity" (p. 334) and economic necessity will therefore force a revolution. "In a knowledge society, school and life can no longer be separate." (p. 324) The diploma curtain is seen as a problem, as is the prolongation of adolescence by the schools and the inherent conflict between extended schooling and continuing education. Because of our knowledge needs, "We face an unprecedented situation in which we will have to set priorities for new knowledge" (p. 365) and the existing disciplines will not remain appropriate for long, if knowledge is to have a future.

37. BOULDING, Kenneth E. Social Dynamics. N.Y.: Free Press, Fall 1970. Approximately 125 pp.

"Provides an overview of patterns of social change from an interdisciplinary perspective. Drawing on insights from biology, history, sociology, philosophy, and economics, this text is primarily concerned with the analysis of what major patterns can be discerned in the long term trends in society. The author presents a clear discussion of the shortcomings of the Marxist dialectical theory of social change." (advt.)

38. HACKER, Andrew. The End of the American Era. N.Y.: Atheneum, 1970. 239 pp.

A pessimistic view of the disintegration of social cohesion in the United States, and the declining quality of scholarship.

39. HUXLEY, Aldous. Brave New World. (Many editions, first published in 1939.)

A classic anti-utopia that still provides a plausible scenario of an undesirable future condition. Especially relevant for our time are the observations on the use of "soma." George Orwell's 1984 (first published in 1949, also with many editions), although an obvious classic, lacks the wit and subtlety of Huxley.

40. Educational Policy Research Center at Stanford. Alternative Futures and Educational Policy. Menlo Park, Calif.: Stanford Research Institute, EPRC Memorandum Report, January 1970. 43 pp.

Tentatively summarizes the findings of a preliminary set of alternative future histories prepared at EPRC/Stanford, and suggests implications for educational policy. Of some two score future histories (ranging

from Manifest Destiny and Exuberant Democracy to Authoritarian Recession, "1984"/Theocracy, and Collapse),"there are very few which manage to avoid one or another kind of time of serious troubles between now and 2050. The few that do, require a dramatic shift of values and perceptions with regard to what we came to term the 'world macroproblem.' This macroproblem will be the predominant concern of the foreseeable future, for all the alternative paths. It is the composite of all the problems which have been brought about by a combination of rampant technology application and industrial development together with high population levels." (p. 6)

"The overall message is clear. It is not yet time to redesign education for ecstatic individuals in a carefree world. To the extent that one believes that the analysis of the roots of the 'world macroproblem' holds up, to that extent he will believe that the paramount educational task for the nation is the development of a sense of purpose and unity. To that extent, also, it will seem essential that we re-examine all our present educational institutions, practices, and commitments to determine how their priority is altered in view of these future outlooks." (p. 42)

41. GORDON, Theodore J. and Robert H. AMENT. Forecasts of Some Technological and Scientific Developments and their Societal Consequences. Middletown, Conn.: The Institute for the Future, IFF Report R-6, September 1969. 98 pp.

The Delphi method involves a questionnaire mailed to a panel of experts who, after several iterations, tend to produce a converging group consensus--in this instance, on important prospective events, when they might take place, societal consequences and the degree to which they are likely to be beneficial or detrimental, and the degree to which intervention appears feasible.

The panelists ruminated on 32 physical events, including the following (median date of 50% change of occurrence in parentheses): central data storage facility with wide public access (1980), language translators (1980), sophisticated teaching machines responsive to student's physiology (1980), individual portable two-way communication devices (1990), and 3-D television (1990). Similarly, 44 biological events were considered, including cheap non-narcotic drugs for producing specific personality changes (1980), laboratory creation of artificial life (1980), relatively inexpensive techniques to increase the world's arable acreage by 50% (1990), the ability to stimulate maximum cognitive growth of pre-school children (1995), and chemical control in the aging process (2015).

In addition to the elaboration of consequences for each of these events, 3 scenarios are constructed by the authors of the technological world in 1985, 2000, and 2025. The overall conclusion is that "Taken together, the forecasted events, the expected consequences, and the suggested strategies which might be employed in manipulating them, tell of a changing world in which man is gaining more precise control over his environment, his information, and himself; a world in which the new control techniques will increase comfort, eliminate some human misery, increase military power, and increase knowledge, but which will concomitantly bring political and social problems of unprecedented dimensions; a world in which the techniques for coping with these problems will not be much more advanced than they are today." (pp. 7-8)

These forecasts, however, should not be taken as Revealed Truth. (See Weaver, Item 8 for qualifications to the methodology.) Nevertheless, this broad array of possibilities should be considered, if for no other reason than as a compact listing of scientific aspirations circa 1969.

42. DE BRIGARD, Raul and Olaf HELMER. Some Potential Societal Developments, 1970-2000. Middletown, Conn.: The Institute for the Future, IFF Report R-7, April 1970. 134 pp.

Unlike IFF Report R-6 (above), which has precedents back to the original Gordon and Helmer RAND study of September 1964, this report concerns the first attempt to employ the Delphi method in forecasting societal developments. Adding to this lack of scientific precedent is the inherent difficulty of accurately gauging social matters in the present, let alone the future.

Nevertheless, the authors have forged ahead, providing substantial qualification to their effort. Potential developments are assessed in major categories of urbanization, the family, leisure and the economy, education, food and population, international relations, conflict in society and law enforcement, national political structures, values, and the impact of technology on government and society. In some instances, convergent opinions were obtained (e.g., inexpensive and uncomplicated mass contraceptive devices will be available, education will become much more decentralized and diversified), while in other instances there was wide disagreement (e.g., the alienation and impersonality of urban life will increase, widespread famine will occur). At the end of each of the ten sections, there is a brief but valuable discussion of "some policy issues raised by the preceding expectations." In the final section of the report, the panelists estimated to the year 2000 the course of 46 statistical indicators such as GNP, divorce rate, expenditures for education, life expectancy, income levels, overseas travel, etc.

Being an initial effort, this panel was limited to 34 members--hardly enough, in light of the multitude of topics explored, to focus a balanced array of expert opinion on any one question. Aside from providing a substantial listing of largely unconnected events, the chief value of this document is as an exercise in futures methodology that may serve to influence future applications of the Delphi technique.

c. Technology and Society

43. MESTHENE, Emmanuel G. Technological Change: Its Impact on Man and Society. Harvard Studies in Technology and Society. Cambridge: Harvard University Press, 1970. 124 pp. $4.95.

"Explores the manner in which technological innovations create both new opportunities and new problems for society, and discusses the social, political, economic, and ethical reorganization that they often necessitate. An extensive annotated bibliography supplements the work." (advt.)

44. MULLER, Herbert J. The Children of Frankenstein: A Primer on Modern Technology and Human Values. Bloomington: Indiana University Press, 1970. 431 pp. $10.00

A balanced, "informal" volume by a well-known "nonprofessional historian," (presently a Professor of English and Government) who addresses "the general reader." The view of technology is that the consequences have been "profoundly, thoroughly mixed," in contrast to Ellul, whose totally negative view is rejected as over-stated and over-simplified. After providing historical background, the impact on society and culture is explored in separate chapters on war, science, government, business, language, higher education, natural environment, urban environment, mass media, the traditional arts, religion, and people. The chapter on higher education observes the consequences of specialization and "the spell of scientific methods," with a view that "most college graduates--whatever their specialty--have too limited an understanding of our technological society for potential leaders." (p. 230) The final three chapters are under the heading "Toward the Year 2000," examining utopian writers of the past, the individual papers from the Commission on the Year 2000, and Kahn and Wiener's The Year 2000. A concern for human nature and recurrent human values is expressed throughout, and it is concluded that the Brave New World of Huxley "looks like a real possibility, considering the nature of technological man and affluent man in America." (p. 405) As suggested by the sub-title, this volume should serve well as a primer, despite some rambling, a reticence to forecast, and some curious notions, e.g. "most middle-class teenagers appear to be basically satisfied with themselves and their prospects, by no means alienated from their society." (p. 364. This may have been truer in 1968 when written, than in 1970 when published.)

45. BURKE, John G. (ed.). The New Technology and Human Values. Belmont, Calif.: Wadsworth Publishing Co., 1966. 408 pp.

A well-organized introductory reader including a section on "Education in a Technological Era" and a focus on problems such as leisure, automation, population, privacy, and government.

2. New Developments in Science and Technology

46. TAYLOR, Gordon Rattray. The Biological Time Bomb. N.Y.: World Publishing Co., NAL Books, 1968. 240 pp.

A pessimistic overview of the biological future by an authoritative popularizer of science. Covers sex, transplantation, death, mind control, genetics, and the creation of life, concluding that "The root of our problem, pragmatically, is the absence of any means of measuring satisfaction . . . Current indications are that the world is bent on going to hell in a handcart and that is probably what it will do." (p. 230) For a prestigious and optimistic overview, see Philip Handler (ed.), Biology and the Future of Man (Oxford, 1970. 936 pp. $12.50), the distillation of 175 distinguished American scientists working on 20 panels for the National Academy of Sciences. Although these two volumes have not been compared, the less "respectable" synthesis by Taylor may be far more relevant insofar as pointing out potential impacts on man.

47. BENDER, A. Douglas, et. al. "Delphic Study Examines Developments in Medicine," Futures, 1:4, June 1969, pp. 289-303.

The results of a Delphi study conducted for Smith, Kline and French laboratories as an aid to the planning of a pharmaceutical company, and covering the areas of biomedical research, diagnosis, medical therapy, health care, and medical education. From these results, a scenario of "Medicine 1980" is presented. (pp. 294-300)

48. BJERRUM, Chresten A. "Forecast of Computer Developments and Applications 1968-2000," Futures, 1:4, June 1969, pp. 331-338.

Results of a Delphi study, with the general consensus that "rapid development of advanced computers and computer applications is expected to continue to the year 2000 and result in much more influence on society than today." (p. 335) Some of the forecasts: a 50% reduction of the labor force in present industry by the late 1980's, all major industries controlled by computers in the year 2000, patients in major hospitals controlled by computers around 1975, computer prices (despite advanced technology) to decrease by a factor of 100 (!) by the end of the 1980's, etc.

49. CALDER, Nigel (ed.). Unless Peace Comes. A Scientific Forecast of New Weapons. N.Y.: The Viking Press, 1968. 243 pp.

16 experts discuss what the quest for new destructive power is likely to produce in forthcoming decades. An important inventory of possible horrors that should not be ignored.

50. FIELD, Roger Kenneth. "In the Sixties, It Was TV; In Seventies, Video Cassette," New York Times, Sunday, July 5, 1970, Section 3, p. 1.

An extensive feature article on the various video cassette devices that are being developed by CBS (EVR or Electronic Video Recording), RCA (SelectaVision), and others. This new technology, to be introduced in the early 1970's, may prove to have a far greater impact on education than broadcast television; e.g., by packaging courses of instruction.

51. MOVSHEN, George. "The Video Revolution: Choosing Your Own Programs," Saturday Review, August 8, 1970.

An overview of the various video cassette options that will be available to consumers in the next few years, with a listing of the 14 companies presently in the field and a discussion of differences between the options. Although this item and the Times article listed above do not discuss the applications of video cassettes to education and learning, this is obviously an important technological development. Until an analysis of the implications of video cassettes is published, these two articles remain as the most important guide to the immediate future that are known to this compiler.

52. "UMF and the Future," Saturday Review, April 19, 1969, p. 26.

An important editorial on the possible impacts of Ultramicrofiche (UMF), a new device "as far beyond microfilm as the microscope is beyond the magnifying glass." By representing 2,000 pages on a transparency smaller

than a book page, "UMF will revolutionize the physical form of the library . . . (and) new libraries can be built at a fraction of the cost of present designs."

3. Population, Food, Ecology

53. DJERASSI, Carl. "Birth Control after 1984," Science, 169: September 4, 1970, pp. 941-951.

Discusses contraceptive methods of the future and their feasibility. It is concluded that an "Orwellian" approach, such as disseminating an agent through drinking water, "is totally unfeasible by 1984." Fundamentally new birth control methods in the female (such as once-a-month pills) and a male contraceptive pill "probably will not be developed until the 1980's at the earliest, and then only if major steps . . . are instituted in the early 1970's." If new incentives for continued active participation of the pharmaceutical industry are not developed during the next decade, "birth control in 1984 will not differ significantly from that of today." (p. 951)

54. PADDOCK, William and Paul PADDOCK. Famine--1975! America's Decision: Who Will Survive? Boston: Little, Brown and Co., 1967. 276 pp.

The two brothers--one a retired diplomat, the other an agronomist and plant pathologist--have written a lucid, straight-forward, yet well-documented book that consistently underlines the theme that famine is inevitable in the underdeveloped nations. All of the familiar hopes about breakthroughs in synthetic foods, hydroponics, desalinization, ocean farming, agricultural research, fertilizers, irrigation, idle land, and land reform are smashed. "The timetable of food shortages will vary from nation to nation, but by 1975 sufficiently serious food crises will have broken out in certain of the afflicted countries so the problem will be in full view. The Time of Famines will have begun." (p. 205) The U. S. is seen as the sole help of the hungry nations, but having to make painful decisions as to which hungry nations to aid, in the "Age of Food" when food becomes the main source of international power.

55. NICHOLSON, Max. The Environmental Revolution: A Guide for the New Masters of the World. N.Y.: McGraw-Hill, 1970. 366 pp. $10.00.

Also see Paul R. and Anne H. Ehrlich, Population, Resources and Environment (Freeman, 1970. $8.95) and Lynton Keith Caldwell, Environment: A Challenge for Modern Society (N.Y.: Natural History Press, 1970. $7.95). These three books are considered by Paul Shepard (New York Times Book Review, August 30, 1970, p. 3) to be the best among a dozen new books on the environment. It is not known by this compiler as to what degree these books deal with the future; however, Paul Ehrlich has written several pessimistic eco-scenarios. For example, see Paul Ehrlich, The Population Bomb (N.Y.: Ballantine Books, 1968; 3 scenarios, pp. 69-80). Also see a single scenario by Ehrlich, "Eco-Catastrophe," in Garrett de Bell, The Environmental Handbook. (N.Y.: Ballantine Books, 1970, pp. 161-176).

4. Cities

56. DOXIADIS, Constantinos A. "The Coming Era of Ecumenopolis," Saturday Review, March 18, 1967, pp. 11-14.

Due to population growth, foresees "a universal city, Ecumenopolis, which will cover the earth with a continuous network of minor and major urban concentrations of different forms . . . the pressure of population on resources will be such that important measures will have to be taken so that a balance can be retained between the five elements of the anthropocosmos in a universal scale." (p. 13) The anthropocosmos--the real world of man--contains nature, man himself, society, shells (or structures), and networks. (There is a considerable amount of Doxiadis' writing scattered about, and this is not necessarily representative.)

57. HODGE, Patricia Leavey and Philip M. HAUSER. The Challenge of America's Metropolitan Outlook, 1960 to 1985. Prepared for The National Commission on Urban Problems. N.Y.: Praeger, 1968. 90 pp.

A projection of growth in Standard Metropolitan Statistical Areas, largely in suburban rings, and a growing concentration of nonwhites in SMSA's, especially in central cities. "The problems facing the central city schools--especially in respect to integration--are highlighted by an anticipated almost doubling (92 per cent) of nonwhite youngsters under 15, while corresponding white youth would diminish by 8 per cent." (p. 55) "The projections clearly indicate that the present 'urban crisis' is likely to be greatly exacerbated in the coming years and that serious difficulties will face the nation in respect to intergroup relations, education employment, housing, and provisions for the aged." (p. 57)

58. BANFIELD, Edward C. The Unheavenly City: The Nature and Future of Our Urban Crisis. Boston: Little, Brown and Co., 1970. 308 pp. $6.95.

A social scientist's sophisticated, hard-nosed, and gloomy analysis of urban problems in the light of scholarly findings. "So long as the city contains a sizable lower class, nothing basic can be done about its most serious problems." (p. 210) "It is impossible to avoid the conclusion that the serious problems of the cities will continue to exist in something like their present form for another twenty years at least." (p. 255) Present programs are seen as prolonging these problems and perhaps making them worse. In part this is due to false definitions of the situation, perpetuating a "reign of error," e.g., defining so many situations as "critical." In Chapter 7, "Schooling vs. Education," Banfield advocates lowering the school-leaving age to 14 to get non-learners out of school and therefore stop their anti-education, and the possibility of school districts contracting with industry for job training. Possibilities for changing schooling are not considered. In Chapter 10, various alternatives to free children from the grip of lower-class culture are explored, such as state removal from parents, boarding schools, and day nurseries--but little hope is offered here or in other areas, other than the possibility of replacing the conventional wisdom of do-gooding over the next decade or two as a consequence of social science brought to bear on policy questions.

59. U. S. Department of Housing and Urban Development. Tomorrow's Transportation: New Systems for the Urban Future. Washington: Office of Metropolitan Development, Urban Transportation Administration, May 1968. 100 pp.

The report, a summary of recommendations for a comprehensive program in all aspects of urban transportation, is the first major effort of its kind. After surveying trends in urbanization and urban transportation, it lists various inter-related strategies for action, including recommended future systems such as dial-a-bus, personal rapid transit, dual mode vehicle systems, automated dual mode bus, pallet or ferry systems, and fast inter-urban transit links.

5. Manpower and the Economy

60. LECHT, Leonard A. Manpower Needs for National Goals in the 1970's. N.Y.: Praeger, 1969. 183 pp. $7.50.

A report of ongoing research by the National Planning Association's Center for Priority Analysis, predicated on the assumption that the U. S. will move ahead to implement national goals in 16 critical areas: agriculture, area redevelopment, consumer expenditures, education, health, housing, international aid, manpower retraining, national defense, natural resources, private plant and equipment, research and development, social welfare, space, transportation, and urban development. It is concluded that "If we continue to follow present patterns of employment, discrimination, training, and education, our attempts to implement national goals and solve these problems will be hamstrung by substantial labor shortages. Even advanced technology and increased automation will not alter this picture for . . . each new development creates additional manpower demands requiring new skills. Hence, only advance planning in both private and public sectors can alleviate manpower bottlenecks that would cripple new programs at the outset." (book cover)

61. GALBRAITH, John Kenneth. The New Industrial State. Boston: Houghton-Mifflin, 1967. 427 pp.

A comprehensive view of modern economic life and the changes that are shaping its future, especially focusing on the Technostructure (the complex of specialists and technicians now exercising decisive power), the Revised Sequence (where, instead of the consumer as sovereign, large business firms now control markets and arrange consumer behavior to serve their needs), the Educational and Scientific Estate which is replacing the waning power of the unions as a political force, and "the convergent tendencies of industrial societies, however different their popular and ideological billing." Galbraith concludes that "if economic goals are the only goals of the society it is natural that the industrial system should dominate the state and the state should serve its ends. If other goals are strongly asserted, the industrial system will fall into its place as a detached and autonomous arm of the state, but responsive to the larger purposes of society." (p. 399)

62. MISHAN, E. J. Technology and Growth: The Price We Pay. N.Y.: Praeger, 1969. 193 pp.

A popular version of The Costs of Economic Growth, written to convince the public "of the need of radical change in our habitual ways of looking at economic events."

63. The Staff of the Wall Street Journal. Here Comes Tomorrow! Living and Working in the Year 2000. Princeton, N.J.: Dow Jones Books, 1967. 196 pp.

Originally a series of 13 WSJ articles. Essentially optimistic and even approaching a "gee whiz" simplicity. Nevertheless, a large number of trends and plans are drawn together to report where and how it's happening as concerns population, food, computers, communications, energy, air travel, space, cities, automobiles, homes, education, medicine, and war. "Some Office of Education officials estimate that (education) outlays will generate as much 25% of the $2.3 trillion GNP expected in 2000." (p. 155) A Ford Foundation official suggests that "there's a very good possibility that company operations will get to be so educationally competent that they will become degree-granting." (p. 164) This "pop futures" volume provides a quick overview of possible material developments, in a spirit of unabated optimism that one decreasingly finds.

6. Social Structure and Youth

64. CARROLL, James D. "Noetic Authority," Public Administration Review, 29:5, Sept.- Oct. 1969, pp. 492-500.

"This paper suggests that the state is withering away in a psychological sense because of an increase in awareness in contemporary society and a growing questioning of authority. It also suggests the state is withering in a technological sense because of a failure to use organized knowledge to satisfy expectations and values. It then suggests that a new form of the state, the 'innovative state' characterized by a new form of authority, may in time emerge." (Abstract) "Noetic" refers to "the increase in awareness--consciousness--of man's social and physical environment that is occurring throughout much of the world." (p. 492) Noetic politics is the politics of knowledge and awareness in an increasingly complex society that is shifting to a mental base of operations and a collegial form of authority. The implications for educating institutions are not discussed, but are obviously profound.

65. BENNIS, Warren G. Changing Organizations. N.Y.: McGraw-Hill, 1966.

Contrasts traditional ideas of bureaucratic organization with contemporary perceptions and organization change. Through forecasts of organizations of the future over the next 25 to 50 years, the end of bureaucracy is anticipated. The new social systems will be more complex, innovative, unprogrammed, with an emphasis on diverse goals and freedom of expression.

66. MEAD, Margaret. Culture and Commitment: A Study of the Generation Gap. N.Y.: Doubleday and Natural History Press, 1970. 113 pp. $5.00.

A wide-ranging essay summarizing much of Mead's thinking over the past decades and adding new insights on our unique present that is "without any parallel in the past." The argument easily follows the chapter headings: The Past: Postfigurative Cultures and Well-Known Forbears (where lack of questioning and consciousness are the key conditions); The Present: Cofigurative Cultures and Familar Peers (which is institutionalized through age grading); and The Future: Prefigurative Cultures

and Unknown Children (where the child represents what is to come). All men are seen as equally immigrants into the new era, and "Today, nowhere in the world are there elders who know what the children know, no matter how remote and simple the societies are in which the children live. In the past there were always some elders who knew more than any children in terms of their experience of having grown up within a culture system. Today there are none." (pp. 77-78)

67. KENISTON, Kenneth. "You have to Grow Up in Scarsdale to Know How Bad Things Really Are," The New York Times Magazine, April 27, 1969.

Behind this innocent title lies a profound explanation of the broad trends resulting in student revolt. Rejecting the "Oedipal Rebellion" interpretation of Feuer and the "Historical Irrelevance" theory of Brzezinski and Bell, Keniston sees the fusion of two revolutions. On the one hand, there is a continuation of the old revolution of the industrial society, involving "the progressive extension to more and more people of economic, political, and social rights, privileges and opportunities originally available only to the aristocracy." Affluent youth take these values for granted, seeing them as rights and not as goals. While demanding these rights, a new revolution--consonant with a post-industrial society--is developing. Beyond affluence is a concern with the quality of life and a stress on the values of individuality, participation, openness, and continuing human development.

B. Education

a. General

68. COOMBS, Philip H. The World Educational Crisis: A Systems Analysis. N.Y.: Oxford, 1968. 241 pp. Bib., pp. 217-226.

A competent overview of international educational trends, indicating that problems of rising demand and system obsolescence are afflicting all nations in every part of the world. Although the discussion is organized around inputs and outputs, it is nevertheless highly readable, covering not only the formal system but nonformal or "periphery" education. An excellent annotated bibliography of 74 items is provided.

69. MORPHET, Edgar L. and others (eds.). Designing Education for the Future: An Eight State Project. 7 volumes, 1966-1969.

A massive project involving the 8 mountain states and headquartered in Denver. Although the 7 volumes, final report, and 5 sound filmstrips that resulted tend to be rather conventional, leaving one with the impression of blind men somewhat better informed about their elephant of inquiry, there are nevertheless some valuable contributions here, and the ambitious structuring of the entire project is to be especially commended. Most of the following are published by Citation Press, with Morphet and Charles O. Ryan as co-editors of the first three, and Morphet and David L. Jesser as co-editors of the remainder.

Vol. 1. Prospective Changes in Society by 1980. N.Y.: Citation, 1967. 268 pp. (16 articles by non-educators.)

Vol. 2. Implications for Education of Prospective Changes in Society. N.Y.: Citation, 1967. 323 pp. (20 articles, largely by professional educators, in response to Vol. 1.)

Vol. 3. Planning and Effecting Needed Changes in Education. N.Y.: Citation, 1967. 317 pp. (26 articles, largely by professional educators, on planning for and effecting change in schools, school systems, metropolitan areas, and at the state level.)

Vol. 4. Cooperative Planning for Education in 1980: Objectives, Procedures, and Priorities. N.Y.: Citation, 1968. 105 pp. (4 worthwhile articles concerned with prospective social change and the implications for educational planning.)

Vol. 5. Emerging Designs for Education. Denver: Designing Education for the Future, May 1968. 240 pp. (4 articles on implications of societal changes for the educational program, alternative local school district models, and alternative models for state financing.)

Vol. 6. Planning for Effective Utilization of Technology in Education. Denver: Designing Education for the Future, August 1968. 372 pp. (32 articles, many of them from representatives of potential supplying organizations.)

Vol. 7. Preparing Educators to Meet Emerging Needs. Denver: Designing Education for the Future, 1969.

70. BYRNES, James C., with the assistance of Michael FOLK. The Quantity of Formal Instruction in the United States. Prepared for the U. S. Office of Education by the Educational Policy Research Center. Syracuse: EPRC, August 1969. 67 pp.

Examining the educational system as a whole, the development and maturation of a nearly universal system of secondary school instruction is considered as "the most significant event of the 20th Century in the development of educational institutions in the United States." Yet, the proportion of high school graduates completing a four-year post-secondary degree stands today roughly what it was about the turn of the century. The report concludes by describing two specific alternative states for the quantity of instruction (as measured by time), which highlights two possible extremes for future policy: a continuous rise in the amount of instruction received vs. stabilization.

71. U. S. Office of Education. Education in the Seventies. Office of Program Planning and Evaluation, Planning Paper 68-1, May 1968. 44 pp.

Projections of enrollments, staff, and expenditures to 1975 for elementary, secondary, and higher education.

72. PETERSON, A. D. C. The Future of Education. London: The Cresset Press, 1968; N.Y.: Humanities, May 1969. 234 pp.

In predicting future development, the author states at the outset that "education has one advantage over other social activities. It has lagged so far behind the changes in society as a whole that we already know that it at least needs considerable adaptation, before it is relevant even to the society in which we are now living." (p. 1) Although concerned with education in England, there may be considerable relevance to the U. S. as concerns the description and prescription of developments in content, methods, administration, the teaching profession, tertiary education, and financing.

73. YOUNG, Michael. The Rise of the Meritocracy, 1870-2033: An Essay on Education and Equality. London: Thames and Hudson, 1958; Baltimore: Penguin Books, Pelican edition, 1961. 190 pp.

A brilliant and witty essay by a sociologist who writes as a sociologist in the year 2033, defending the existing order and providing historical background for government leaders. (A short-term forecast is also provided, which proves disastrously inaccurate.) Brain-power planning became more effective as the measurement of merit (intelligence + effort) became more effective, so that "The world beholds for the first time the spectacle of a brilliant class, the five per cent of a nation who know what five per cent means." (p. 103) The most intelligent children obtained the best education, and to insure justice for late developers, quinquennial revaluations were held at Regional Centres for Adult Education. With the intelligent taking their rightful positions of leadership, the Pioneer Corps was established to provide the least responsible jobs for the least able people, and the Home Help Corps provided domestic servants again, after a lapse during the egalitarian age. Consequently, the gap between the classes became wider, with social inferiors being inferiors in other ways as well. Despite the Equalization of Income Act of 2005, tensions grew between the Technician's Party (which issued the "Chelsea Manifesto" in 2009, arguing for a classless and tolerant society where every human being could develop his own special capacities for leading a rich life), and the extreme conservatives who, seeing the principles of heredity and merit coming together, wished to turn full cycle and restore the hereditary principle.

Despite necessary simplifications (assuming an industrial society and "the dictatorship of biology" over women) there is considerable insight to be had from this essay, and the format serves as an exemplary model of a "future history."

b. Elementary and Secondary

74. EURICH, Alvin C. and the Staff of the Academy for Educational Development (eds.). High School 1980: The Shape of the Future in American Secondary Education. N.Y.: Pitman Publishing Corporation, 1970. 304 pp. $8.50.

Articles on the reformed curriculum in English, Social Studies, Science, Foreign Languages, and Vocational Education, in addition to views of the future of school buildings, guidance and testing, the school without walls, relevance, etc.

75. GOODLAD, John I. "The Schools vs. Education," Saturday Review, April 19, 1969.

A critique based on many classroom visits of the lack of progress in the past ten years. "Popular innovations of the decade--non-grading, team teaching, 'discovery' learning, and programmed instruction--were talked about by teachers and principals alike but were rarely in evidence." This well-known educator concludes that "The schools are conspicuously ill-suited to the needs of at least 30 per cent of their present clientele." (p. 61) Recommended as a short, no-nonsense overview of the state of elementary and secondary education in America. For a longer, earlier,

and less pessimistic summary of changes in curricula (marked by updating of content, reorganization of subject matter, and new methods), see John I. Goodlad, The Changing School Curriculum (N.Y.: Fund for the Advancement of Education, 1966. 122 pp.).

76. GOODLAD, John I. The Future of Learning and Teaching. An Occasional Paper of The Center for the Study of Instruction. Washington: National Education Association, 1968. 24 pp.

Address at 1967 inaugural ceremonies of Sam Lambert as NEA Executive Secretary. Discusses impact of computer on schools and informal education, the need for "human-based schools" and a humanistic curriculum. By the year 2000, "School, as we now know it, will have been replaced by a diffused learning environment involving homes, parks, public buildings, museums, and an array of guidance and programming centers." (p. 22) Teachers are warned that if they do not legitimize the computer, the profession will be bypassed.

77. MCLUHAN, Marshall and George B. LEONARD. "The Future of Education: The Class of 1989," Look, 31:4, February 21, 1967, pp. 23-25.

A short and provocative forecast of education by two well-known writers Mass education is seen as a child of the mechanical age, and with the advent of new technologies, "the very first casualty of the present-day school system may very well be the business of teacher-led instruction as we now know it." The new education "will be more concerned with training the senses and perceptions than with stuffing brains . . . The new student who makes his own educational space, his own curriculum and even develops many of his own learning methods will be unique, irreplacable."

78. KRAFT, Ivor. "The Coming Crisis in Secondary Education," The Bulletin of the National Association of Secondary School Principals, 49:298, February 1965, pp. 5-42.

The entire issue is focused on this trenchant article, which contends that the coming crisis will be fully upon us by 1975. Three components of the crisis involve the incompetence and timidity of educators, administrators, school boards, and policy makers, leaving secondary education leaderless and aimless; the polarization of schools into services for largely college oriented youth and services for lower class youth; and the content and subject matter of education or the discrepancy in relating the learner to what is to be learned. The remainder of the issue is devoted to 14 respondents.

79. ROBINSON, Thorington P. The Implication of Selected Educational Trends for Future School Systems. Santa Monica: System Development Corporation, January 1968. SP-3046. 94 pp.

An extrapolation of two major trends: 1. The trend toward the assumption by the schools of tasks and responsibilities previously undertaken by the family, other public agencies, and industry; and 2. The trend toward providing individualized education to all school students. Based on these trends, two skillfully constructed and plausible scenarios are presented.

80. GREEN, Thomas F. "Schools and Communities: A Look Forward," Harvard Educational Review, Spring 1969.

A philosopher's discussion of school-community relationships in the 1980-1990 period, focused on both change and continuity.

c. Higher Education

81. KERR, Clark. The Uses of the University. Cambridge: Harvard University Press, The Godkin Lectures, 1963. 140 pp.

Although primarily known for introducing the concept of the "multiversity," there is also a provocative chapter entitled "The Future of the City of Intellect." Planners might well contemplate the statement (p. 102) that "Change comes more through spawning the new than reforming the old."

82. EURICH, Alvin C. and the Staff of the Academy for Educational Development. Campus 1980: The Shape of the Future in American Higher Education. N.Y.: Delacorte, 1968. 327 pp.

A competent anthology of largely descriptive forecasts by the top writers on higher education, who adhere quite well to the objective of looking at "Campus 1980." Topics include the magnitude of higher education, higher education and the national interest, cities and universities, universities and the world, professionalism, teaching, community colleges, continuing education, college students, curriculum, instructional organization, instructional technology, graduate education, campus architecture, and the university and change.

83. MAYHEW, Lewis B. (ed.). Higher Education in the Revolutionary Decades. Berkeley: McCutchan, 1967. 466 pp.

A reader presenting an excellent selection of 34 articles, some of which are cited elsewhere in this bibliography. Although many of the articles deal with trends in the revolutionary decades since World War II, the inclusion of several future-oriented articles implies that forthcoming decades will also be revolutionary. Especially see the scenario by Alvin C. Eurich, "A Twenty-First Century Look at Higher Education," (pp. 443-453) in which universities are seen as stressing wisdom rather than fact-mongering, using television lectures by the world's leading scholars, judging students by standardized criteria of achievement rather than time spent in college, employing microfilmed libraries and portable television sets in dormitory rooms, and allowing individual determination of course mixes. (Eurich offers a similar but updated scenario in Reforming American Education, Item 120.)

84. CAFFREY, John (ed.). The Future Academic Community: Continuity and Change. Washington: American Council on Education, 1969. 327 pp. $7.00.

Proceedings of the 1968 ACE Annual Meeting, including articles by Bertrand de Jouvenel, Alvin C. Eurich, Constantinos Doxiadis, John Gardner, etc.

85. JOHNSON, Byron Lamar. Islands of Innovation Expanding: Changes in the Community College. Beverly Hills, Calif.: Glencoe Press, 1969. 352 pp.

An authoritative report on a 1967-68 non-statistical survey of innovation in instruction at more than 200 junior colleges. From the context of change in society, education, and junior colleges in general, Johnson discusses specific innovations such as co-op work-study, programmed instruction, the systems approach to instruction, gaming, students as teachers, independent study, etc. Aids and obstacles to innovation are then discussed, with concluding comments on the need for evaluation. Several trends are extrapolated into the short-range future.

86. EURICH, Alvin C., Lucien B. KINNEY, and Sidney G. TICKTON. The Expansion of Graduate and Professional Education During the Period 1966 to 1980. Studies in the Future of Higher Education, Report No. 2. N.Y.: The Academy for Educational Development, April 1969. 96 pp.

Based on a sample of 149 universities, all of which were visited in 1967 by a team under the direction of Lewis B. Mayhew. The universities studied expected a growth of 130% in graduate and professional school enrollments from 1967 to 1977. But their plans were frequently not written down in any detail, "nobody knows how much the new and expanded graduate programs will cost in the future," (p. 6) and it was implicitly expected that there would be extensive aid from the Federal government. No cutbacks in programs are being planned anywhere: "the theory seems to be that society is going to need more of everything for decades ahead." (p. 6) This document may be somewhat outdated due to recent cutbacks in Federal funding of science.

87. JENCKS, Christopher and David RIESMAN. The Academic Revolution. Garden City: Doubleday, 1968. 580 pp. $10.00.

An authoritative overview focusing on the growth of professionalism and the consequent emergence of the "university college" as "the model for the future." Recent dissent and subsequent change, however, may make this thorough volume somewhat obsolete in the next few years. Although largely empirical, the final chapter is devoted to "Reforming the Graduate Schools," a concern that is largely overlooked in the many volumes devoted to undergraduate education.

88. ROURKE, Francis E. and Glenn E. Brooks. The Managerial Revolution in Higher Education. Baltimore: Johns Hopkins, 1966. 184 pp.

A thorough analysis, based on questionnaires and interviews, that estimates the degree to which more rationalized college and university administration has taken place, as regards use of EDP equipment, offices of institutional research, and allocation of resources. Several of the conclusions are that the potential of computers is still largely unrealized, institutional self-study will become increasingly common and varied, and that there is an "unmistakable" trend toward more rational procedures in the management of money and space. The emerging style of university administration is toward greater candor, a cabinet style of governing, and new forms of decision-making. One of the great unresolved questions is whether the new managerial techniques lead to a centralization of power.

89. WALLERSTEIN, Immanuel. University in Turmoil: The Politics of Change. N.Y.: Atheneum, 1969. 147 pp. $4.95.

A deep, astute, and elegant essay by a political sociologist. "Three questions about the university in society have come to the fore--none of them new but all posed with renewed urgency and simultaneously. One question is the degree to which it is appropriate for the university . . . to collaborate with the government. The second question is the degree to which it is appropriate for the university to attach some priority to the needs and concerns of the oppressed groups within the society. The third question is how the university may itself best be governed. . . " (p. 9)

"However it acts in relation to the government, the university is engaged in politics." (p. 11) Changing university linkages to government is seen as having relatively little impact on external policy, but changing university policies in view of their growing role as a mechanism for distributing social status and as urban property owners is seen as having a profound impact on society. Finally, overt clashes with the ethnic left and the ideological left is seen as part of a long-range trend to libertarian and participation values. "We are at the early stage of this conflict, the stage of initial testing of strength." (p. 133) This, in turn, will evolve to a stage of constitution-drafting, "perhaps for thirty years or so." (p. 129)

"Thus reform of curricula is not a primary issue. It will come about almost automatically as a consequence of the other changes we have been discussing, and it will not come in any significant measure without them." (p. 146)

90. Confrontation: A Newsletter from The Lemberg Center for the Study of Violence. Special Issue on "Explanations of Student Unrest." Waltham, Mass.: Brandeis University, April 1970. 23 pp. Free.

A scholarly survey of the literature, as concerns participants, issues and goals, processes, and outcomes. The area of concern, however, is limited to colleges and does not cover high school protests. A bibliography and a summary of field research and case studies cites about 70 items on student dissent and violence--the most extensive bibliography for this area that is known to this compiler.

d. Adult Education

91. MOSES, Stanley. The Learning Force: An Approach to the Politics of Education. Prepared for the U. S. Office of Education by the Educational Policy Research Center. Syracuse: EPRC, March 1970. 40 pp.

The Learning Force includes all students in Core institutions (elementary, secondary, and higher education) as well as those in the Periphery (corporation and military training programs, proprietary schools, anti-poverty programs, correspondence schools, formal courses conducted over educational television, and other adult education programs conducted by Core institutions, museums, libraries, unions, etc.). Moses supplies trend data (1940-1975) indicating that enrollments in the Periphery (assessed on a head count rather than an FTE basis) are growing at a rapid rate and will be about 25% greater than Core enrollments by 1975. It is concluded that "Activities in the Periphery provide the basis for developing a new framework for the considerations of educational policy. A consideration of the

total Learning Force provides the basis for making an accurate assessment of the true dimensions of education in American society, not only regarding enrollments . . . but also total educational expenditures and employment. A consideration of the total learning force also provides the basis for making more rational decisions regarding policy for the Core as well as providing the basis for new iniatives in the Periphery." (p. 37)

92. ZIEGLER, Warren L. (ed.). Essays on the Future of Continuing Education--World-wide. Syracuse: Syracuse University Publications in Continuing Education, S.U. Press, July 1970. 141 pp. $3.00

8 articles discussing trends in adult education and methods of thinking about and planning for the future.

93. LIVERIGHT, A. A. A Study of Adult Education in the United States. Boston University Center for the Study of Liberal Education for Adults, 1968. 138 pp.

Although not primarily aimed at trends or futures, both are considered somewhat in this authoritative overview. Of especial note is the statement that "Even if nothing further is done to stimulate participation, adults involved in continuing education will triple in number within the next twenty years." (p. 13) Views an upgrading image (from "remedial" to "lifelong" learning) and new program directions involving more courses specifically for adults, more non-credit courses, credit for experience, new degree programs, etc.

e. Educational Personnel

94. U. S. Office of Education. The Education Professions: 1968. A Report on the People Who Serve Our Schools and Colleges. Washington: USGPO, OE-58032, June 1969. 377 pp. $2.75.

The first annual assessment of the state of the education professions, as required by the Education Professions Development Act of 1967. A thorough analysis of trends and future requirements through 1975 at all levels, including preschool, elementary, and secondary programs; vocational, post-secondary vocational, and adult education programs; and undergraduate and graduate education, with analysis of personnel in both public and private institutions, and teacher training at each level. Despite "the lack of adequate and comprehensive data on educational personnel . . . the report will hopefully prove to be a positive step toward building a sophisticated bank of information which can be useful to all levels of education." (p. iii)

95. STONE, James C. Breakthrough in Teacher Education. San Francisco: Jossey-Bass, 1968. 206 pp. $7.50.

Discusses the Breakthrough Programs (largely sponsored by the Ford Foundation): "a scattering of models from which new patterns in teacher education might spread. Most of the nation's colleges continue to prepare the majority of future teachers in conventional programs." (p. 155) Especially see chart of trends in teacher preparation (pp. 175-76) and new models for innovation proposed in the last chapter.

96. ROSOVE, Perry E. An Analysis of Possible Future Roles of Educators as Derived from a Contextual Map. Santa Monica: System Development Corporation, SP-3088, March 8, 1968. 82 pp.

A subsequent report to SP-3026 that presents the "complete" results of the experiment in the use of contextual mapping. "The mapping process results in the identification of 98 different possible future roles for educators and also, as a by-product, it identifies 101 potential future issues in education." (p. 3) It is concluded that "the projections of current trends in 18 areas as displayed on the contextual map suggests that (the crisis in education) is merely beginning and will become increasingly complex, fractious, and more costly to resolve in the two decades ahead." (p. 30) To prevent an evolutionary form of drift, four new concepts are proposed: the learning environment as a real time facility (blurring the distinction between work and education); the continuous, vertical, learning organization serving all educational levels; the learning environment as a multipurpose facility; and (the major conclusion of the study as derived from the above three concepts) the generic role of the "learning facilitator" (rather than the present generic role of "teacher") as a counselor, engineer, instructor in the use of learning resources, and researcher.

f. Educational Technology

97. OETTINGER, Anthony, with the collaboration of Sema MARKS. Run, Computer, Run: The Mythology of Educational Innovation. Harvard Studies in Technology and Society. Cambridge: Harvard University Press, 1969. 302 pp. $5.95.

An authoritative, caustic, myth-crumbling essay concluding that "The formal education system is bound to society in a way that is almost ideally designed to thwart change. Little substantive technological change is therefore to be expected in the next decade." (p. 215) The "present innovation fad . . . favors highly visible quickie approaches creating the illusion of progress." (p. 220)

98. ROSSI, Peter H. and Bruce J. BIDDLE (eds.). The New Media and Education: Their Impact on Society. Chicago: Aldine, 1966; Garden City: Doubleday Anchor, 1967. 460 pp.

11 articles by sociologists on recent and projected technological developments, and the impact of the new media on school systems, higher education, adult education, and the total society.

99. Educational Facilities Laboratories. The Impact of Technology on the Library Building. N.Y.: EFL, 1967. 20 pp.

A brief and competent summary of expert opinion concerning the impact of computers on college library buildings.

C. NEW DIRECTIONS: ALTERNATIVES AND REFORMS

1. Commission Reports

a. General

100. National Goals Research Staff, Toward Balanced Growth: Quantity with Quality. Washington: USGPO, July 1970. 222 pp. $1.50.

Outlines options open to policy-makers and advantages and disadvantages of various actions in areas of population growth and distribution, environment, education, consumerism, technology assessment, basic natural science, and economic choices. The introduction by Daniel Moynihan discusses the movement from program to policy-oriented government. The overall theme of balanced growth seeks a more interdependent development, as opposed to policies in the past that "have dealt in a largely independent fashion with specific objectives in their own context." Although judged by some to be overly equivocal, this important document suggests a new direction in public decision-making. The tone contrasts quite markedly, for example, with the certitude of purpose in Goals for Americans: Programs for Action in the Sixties (Prentice-Hall, 1960).

101. National Commission on the Causes and Prevention of Violence. To Establish Justice, To Insure Domestic Tranquility. Final Report. Washington: USGPO, December 1969. 338 pp. $1.50.

Especially see Chapter 9 on campus disorder, which recommends a code of conduct for student-faculty-administration relations, contingency plans for dealing with campus disorders, more rapid and effective decision-making, better communications both on the campus and with alumni and the general public, caution against reactive legislation, and a focus on "striving toward the goals of human life that all of us share and that young people admire and respect." (p. 281) Chapter 10, on "Challenging Our Youth" recommends a lowering of the voting age, draft reform, expanded programs of public service and opportunities for inner-city youth, more research on marijuana use, lowered penalties for use and possession of marijuana, and better communication to bridge the generation gap.

102. National Advisory Commission on Civil Disorders. Report of the National Advisory Commission on Civil Disorders. Special introduction by Tom Wicker. N.Y.: E. P. Dutton and Bantam Books, March 1968. 609 pp.

Based on Chapter 16 ("The Future of the Cities"), Chapter 17 ("Recommendations for National Action") contains an excellent survey of inner-city education, with many proposals for reform. (pp. 424-457)

103. President's National Advisory Commission on Rural Poverty. The People Left Behind. Washington: USGPO, September 1967. 160 pp.

Chapter 5 lists 33 recommendations for changing educating systems so that rural citizens may be better equipped to participate in the modern world.

104. National Commission on Technology, Automation, and Economic Progress. Technology and the American Economy. Vol. 1. Washington: USGPO, February 1966. 115 pp.

The overall conclusion of the Commission is that "our society has not met the challenge of technical progress with complete success. There is much to be done." (p. 6) Of the many recommendations for facilitating adjustment to change, those concerning education are among the most important: universal high school graduation, free public education through grade 14, an open ended system of education stressing lifelong learning, etc. Chapter 9, "Improving Public Decision Making," has an excellent discussion of the role of "social accounting," systems analysis, and "inventing the future."

b. Education

105. QUATTLEBAUM, Charles A. Federal Educational Policies, Programs and Proposals. A Survey and Handbook. Part I: Background; Issues; Relevant Considerations. Washington: USGPO, House Document No. 398 (Printed for the Use of the Committee on Education and Labor), December 1968. 167 pp. 75 cents.

A valuable overview of a variety of areas as follows:

--Federal Policies in education, 1777-1960
--Congressional enactments concerning education and training, 1961-1966
--History, organization, and functions of USOE and NSF
--Recommendations of 17 governmental and 10 nongovernmental ad hoc advisory commissions, 1929-1967
--Policies advocated by 23 government bodies and 55 private organizations.

106. U. S. House of Representatives, Committee on Education and Labor, General Subcommittee on Education. Needs of Elementary and Secondary Education for the Seventies: A Compendium of Policy Papers. Washington: USGPO, Committee Print, March 1970. 982 pp.

"The first section of the compendium consists of essays which have been prepared at the invitation of the Subcommittee by a distinguished group of more than a hundred university faculty members and administrators, industrialists and businessmen, journalists, social philosophers, professional educators, educational researchers, scientists, and other prominent citizens, reflecting perhaps every shade of opinion about education. They have been asked both to predict what will be the compelling issues of the seventies and beyond and to suggest potentially fruitful alternatives. The choice of specific topics, however, has been left to the individual writers.

"The second section of the anthology is comprised of the formal statements which were submitted by witnesses when they testified at the Subcommittee hearings.

"This collection of papers represents perhaps the most extensive survey of the educational needs of the seventies that has been attempted to date." (Foreward by Congressman Roman C. Pucinski, p. v.)

Such a self-assessment can only be heartily seconded. This document is a gold mine, a non-indexed encyclopedia of alternatives.

107. Commission on Instructional Technology. To Improve Learning: A Report to the President and the Congress of the United States. Washington: USGPO, Y4:ED8/1:L47, 1970. 124 pp. 50 cents.

108. Commission on Campus Unrest. Final Report, October 1970.

The Scranton Commission report on "a crisis of violence and a crisis of understanding" finding that most student protesters are neither violent nor extremist. Many recommendations for law enforcement, the President, government, the university, and students.

109. Central Advisory Council for Education (England). Children and Their Primary Schools. Vol. 1: Report; Vol. 2: Research and Surveys. London: Her Majesty's Stationary Office, 1967. 556 pp and 633 pp. respectively. (May be ordered from Sales Section, British Information Services, 845 Third Avenue, New York, New York 10022. Vol. 1, $4.95; Vol. 2, $5.85.)

Known as "The Plowden Report," this thorough and comprehensive study looks at "primary education in all of its aspects and the transition to secondary education." The following are but a few of the many conclusions and recommendations: a higher priority in the educational budget should be given to primary schools (for dollars spent on older children will be wasted if not spent on them during their primary years); "Finding Out" has proven to be better for children than "Being Told"; family background is important; half-time education for 3 and 4 year olds should be provided to ease the transition from home to school; and learners must develop self-confidence in early years.

110. Living and Learning. The Report of the Provincial Committee on Aims and Objectives of Education in the Schools of Ontario. Toronto: Ontario Department of Education (44 Eglinton Avenue West), 1968. 221 pp.

A lovely document, summarizing a wide array of literature and special reports, written cogently and forcefully, and amplified by photographs and drawings. The Committee arrived at two fundamental principles: a) the right of every individual to have equal access to the learning experience best suited to his needs, and b) the responsibility of every school authority to provide a child-centered learning continuum that invites learning by individual discovery and inquiry. (p. 179) Based on these principles, 258 recommendations are made in four broad categories reflecting the sequence of the Report: The Learning Program, Special Learning Situations, The World of Teaching, and Organizing for Learning. The appropriate body for consideration and action is listed with each recommendation.

111. STEINHART, John S. and Stacie CHERNIACK. The Universities and Environmental Quality--Commitment to Problem Focused Education. A Report to the President's Environmental Quality Council. Washington: Executive Office of the President, Office of Science and Technology, September 1969. 71 pp. 70 cents.

A report on several multidisciplinary environmental programs. Despite some promising starts, there is still a severe shortage of ecology professionals, and the report suggests actions that the Federal Government can take, such as assisting in the formulation at colleges and universities of Schools of the Human Environment.

112. U. S. Congress. Senate Committee on Labor and Public Welfare, Special Subcommittee on Indian Education. Indian Education: A National Tragedy--A National Challenge. Washington: USGPO, November 1969. 220 pp. $1.00.

The work of the Subcommittee, chaired by Senator Edward Kennedy, fills 4,077 pages in seven volumes of hearings and 450 pages in five volumes of committee prints. This report is a condensation, concluding with 60 recommendations for action. "We are shocked at what we discovered . . . We have concluded that our national policies for educating American Indians are a failure of major proportions. They have not offered Indian children--either in years past or today--an educational opportunity anywhere near equal to that offered the great bulk of American children." (p. xi)

2. Other Prescriptions

a. General

113. PLATT, John. "What We Must Do," Science, 166: November 28, 1969, pp. 1115-1121.

A concise and powerful overview of the multiple crises that we are confronting, with the view that "it has now become urgent for us to mobilize all our intelligence to solve these problems if we are to keep from killing ourselves in the next few years." Two overview charts are provided (for the U. S. and the World), indicating the priority of problem areas and the estimated time to crisis, broken down in three future periods (1-5 years, 5-20 years, and 20-50 years). For the U. S. the problem areas, in order of priority, are total annihilation, great destruction or change (physical, biological or political), widespread almost unbearable tension (slums, race conflict), large-scale distress (transportation, urban blight, crime), tension producing responsive change (water supply, privacy, drugs, marine resources), other problems important but adequately researched (military R & D, new educational methods), exaggerated dangers and hopes (mind control, heart transplants), and non-crisis problems being overstudied (man in space and most basic science). It is concluded that "The task is clear. The task is huge. The time is horribly short. In the past, we have had science for intellectual pleasure, and science for the control of nature. We have had science for war. But today, the whole human experiment may hang on the question of how fast we now press the development of science for survival."

Although this is one man's list of priorities, it is critically important that more thinking be generated along these lines. Although education is not directly mentioned in this article, the implications should be obvious.

114. GARDNER, John. Self-Renewal: The Individual and the Innovative Society. N.Y.: Harper & Row, 1963. 141 pp.

A lucid and powerful essay advocating "The Ever-Renewing System" and "Educating for Renewal." (See Addenda for new Gardner book.)

115. UDALL, Stewart. 1976: Agenda for Tomorrow. N.Y.: Harcourt, Brace & World, 1968. 173 pp.

Employs the total-environmental approach of "the new conservation" demanding "concepts large enough to relate conservation to the overriding issues of our age. You cannot, in short, save the land unless you save the people."

(p. vii) As an Agenda for the Third American Century, proposes Project 76 as "a vast and viable program that could win and sustain the nation's enthusiasm . . . The first phase of Project 76 should involve every community in drafting a master plan to achieve the redesign and renovation of its entire environment no later than the year 2000." (p. 84) A contemporary political statement of merit.

116. FULLER, Buckminster. Operating Manual for Spaceship Earth. Carbondale: Southern Illinois University Press, 1969. 143 pp.

"The necessity for coping with the totality of the Earth is ahead for all of us, Mr. Fuller says. The alternative is total destruction. He is optimistic that man will survive, provided he corrects his tendency to oblivion into a realization of his potential, to a universe-exploring advantage, from this magnificent craft, this Spaceship Earth. His book is a blueprint for our future." (advt.)

117. STULMAN, Julius. Climbing to Mankind Solutions. N.Y.: World Institute Council (777 UN Plaza), Fields Within Fields . . . Within Fields, 1:3, 1968. 120 pp. $1.00.

A one-man periodical promulgating globalism and the integration of knowledge. A pot-pourri of imaginative ideas and rhetoric, including proposals for an Executive Brain Center, Cargo City (a city within a city to enhance distribution), and Urban Distribution Satellites. The hospital of the future is advocated as a brain center rather than a bed center, and "the medical student should be goal-oriented with the attitude that everything he has been taught is to be considered already antiquated by the time he receives it." (p. 93)

"Only through a totally new method of approach such as that offered by the World Institute which maximizes man's knowledge in a constant flow, cross-catalytically across all the disciplines, breaking it down more nearly to underlying principles, and new common denominators, ultimately we believe to pulsing fields, in systems, in the 'methodology of pattern,' can he hope to cope adequately with his problems." (p. 17)

118. ILLICH, Ivan. "Outwitting the 'Developed' Countries," New York Review of Books, 13: November 6, 1969, pp. 20-24.

A profound and illuminating essay from the viewpoint of the Third World. "The rich nations now benevolently impose a straightjacket of traffic jams, hospital confinements, and classrooms on the poor nations, and by international agreements call this 'development.'" (p. 20) But this merely aids the existing elites, while the proportion of the population suffering from hunger, pain, and exposure in 1969 is seen as greater than at the end of World War II. The resources are simply not available to take on the "outdated" models exported by the rich. Illich calls for "counter-research" on fundamental alternatives "distinct from most of the work done in the name of the 'year 2000.'" For example, to improve health, safe water is more important than more surgical wards, and medical workers are more important than doctors. An egalitarian model is proposed for education, giving every citizen a minimum change and therefore distributing scarce educational resources on an equal basis. Teaching adults to read is seen as a higher priority for public resources than investing in schools, with more immediate return on investment. "There is more hope of planning an institutional revolution in the Third World than among the rich." Perhaps. This essay and 11 others appear in Ivan D. Illich, Celebration of Awareness: A Call for Institutional Revolution. Garden City, N.Y.: Doubleday, 1970. 189 pp. $5.95.

119. HARRINGTON, ALAN. The Immortalist: An Approach to the Engineering of Man's Divinity. N.Y.: Random House, 1969; Avon Discus edition, 1970. 287 pp. $1.25.

A well-written and provocative volume with the overstated central theme that fear of aging and death is "the central passion that drives us."

"The case for the immortalist point of view will rest on the evidence that since the beginning of recorded time man has engaged in a disguised drive to make himself immortal and divine, and that this overriding motive that accounts for much of his significant action, is now driving him toward his evolutionary crisis. The time has come for men to turn into gods or perish." (p. 29) The final chapter describes the society of immortal men, and an appendix deals with the inevitably raised question of population control, seen as a diminishing threat. It is concluded that "Humanity's push toward the utopia beyond time will not be slowed down by the warnings of demographers. Too much pressure has been built up behind it. Research is not going to be called off. The day will arrive when somebody wearing glasses and a sterilized apron will run through a laboratory yelling wildly and waving a test tube. Provided that the species refrains from destroying itself, there will be no way for this not to happen." (p. 262)

b. Education

120. EURICH, Alvin C. Reforming American Education: The Innovative Approach to Improving Our Schools and Colleges. N.Y.: Harper & Row, 1969. 269 pp. $6.50.

"Education must be vastly improved to meet the challenges of the present and the future; the innovative approach is the most promising strategy for bringing about such improvement." Taking a wide-angle view, the author discusses rigid dogmas, the necessity for bold public policies, provocative new developments, new patterns of reform at all levels, and education as a futurist enterprise. An updated scenario (see Item 83), "A Twenty-First Century View of American Higher Education," (pp. 175-199), touches on university cities, sea-grant colleges on floating ocean cities, the revival of philosophy and the humanities to deal with spiritual malaise, learning terminals with graphic tablets and multi-purpose TV type displays, computerized learning, internationalization, individualization, etc.

121. ROGERS, Carl R. Freedom to Learn: A View of What Education Might Become. Columbus, Ohio: Charles E. Merrill Publishing Co., 1969. 358 pp.

An eminent psychologist feels that "all teachers and educators prefer to facilitate experiential and meaningful learning, rather than the nonsense syllable type. Yet in the vast majority of our schools, at all educational levels, we are locked into a traditional and conventional approach which makes significant learning improbable if not impossible . . . It is not because of any inner depravity that educators follow such a self-defeating system. It is quite literally because they do not know any feasible alternative." (p. 5) Alternatives are suggested toward building " a fully functioning person" and a plan for self-directed change in an educating system is proposed. Although the comments are directed at all levels, a special chapter is devoted to "A Revolutionary Program for Graduate Education," in that the graduate level "is frequently the furthest behind the main stream of our culture and is the least educational in any true sense." (p. 189)

122. BERMAN, Louise M. New Priorities in the Curriculum. Columbus, Ohio: Charles E. Merrill Publishing Co., 1968. 241 pp. Bib., pp. 197-238.

A well-researched proposal "to open up the possibility of the development of process-oriented persons within our schools." Each chapter discusses a process and the need for it: perceiving, communicating, loving, decision-making, knowing, organizing, creating, and valuing. Bibliography of about 600 items.

123. UMANS, Shelley. The Management of Education: A Systematic Design for Educational Revolution. Garden City: Doubleday, 1970. 226 pp. $5.95.

The Director of the Center for Innovation of the New York City Board of Education discusses PPBS, change models, educational programs of industry and government, and various trends in electronic media. Advocates a new educational system, "incorporating only those elements of education that have proven to be important." (p. 23) The "Blueprint for the Future" envisions the total community as the school, with the school building of today just one small station, along with educational environment centers (neighborhood facilities offering a full range of services for all people at all times), satellite development centers, block schools, skills centers, and the "'No School' School."

124. GROSS, Ronald and Beatrice (eds.). Radical School Reform. N.Y.: Simon and Schuster, 1969. 350 pp. $7.95.

A wide-ranging anthology of 23 articles. "Radical means going to the root, posing the fundamental problems, and responding with theories and practices which are genuine alternatives to present theory and practice . . . radical means unorthodox ways of promoting learning that fall outside the scope of conventional or even innovative school practice. This book reflects the entire range of radical thought and practice, from the grand demand that compulsory public education be repealed and the formal educational system dismantled to reports of intensely practical teachers working constructively within the existing situation but nevertheless using truly unorthodox teaching techniques." (p. 14)

Especially see: Kenneth B. Clark, "Alternative Public School Systems," (reprinted from Harvard Educational Review, Winter 1968) which discusses regional state schools, federal regional schools, college and university-related open schools, industrial demonstration schools, labor union sponsored schools, and army schools.

125. SILBERMAN, Charles E. Crisis in the Classroom: The Remaking of American Education. N.Y.: Random House, Fall 1970. 525 pp. $10.00.

Based on a three and one-half year study commissioned by the Carnegie Corporation, this broad indictment of all levels of education is based on a thorough review of the literature, extensive interviews and correspondence with educators and critics, and first hand investigation in more than 100 schools by the author and in about 150 more schools by his three-member staff.

Silberman finds the schools to be "intolerable," severely afflicted by "mindlessness," operating on the assumption of distrust, offering a banal and trivial curriculum, and preoccupied with order and control (which in turn creates discipline problems, rather than eliminating them). More than 200 examples of school practice are provided in support of these charges, which are no less severe than those made by the so-called "romantic" critics of the past decade.

Based on an analysis of the superiority of English primary schools, "informal education" (also known as free schools, open learning systems, etc.) is strongly advocated.

126. FANTINI, Mario, Marilyn GITTELL, and Richard MAGAT. Community Control and the Urban School. Introduction by Kenneth B. Clark. N.Y.: Praeger, July 1970. 288 pp. $7.95; $2.95 paper.

"A comprehensive study of the participation issue in urban public schools. Tracing the development of public education and the bureaucratization of school systems since the 1900's, the authors examine where and for whom the attempt to provide universal education failed. They offer a persuasive case for community control as a means of achieving the participation they consider to be an intrinsic part of the education process." (advt.)

127. Center for the Study of Public Policy. Education Vouchers: A Preliminary Report on Financing Education by Payments to Parents. Cambridge, Mass.: The Center (56 Boylston Street), March 1970. 219 pp.

A report of the first phase of research contracted by USOE which explores the following areas: determining the value of vouchers and the restrictions (if any) on private supplementation, insuring adequate information for intelligent choices by parents, procedures for allocating scarce places, education vouchers compared with state "purchase of services" from private schools, and the relationship of vouchers to racial segregation and the First Amendment prohibition against establishment of religion. The second phase of this important research will demonstrate the feasibility of an experimental project.

128. TAYLOR, Harold. The World as Teacher. N.Y.: Doubleday, 1969. 322 pp. $6.95.

The result of a two-year study of the education of American teachers in world affairs. Proposes a wide array of reforms, to make education more relevant to the emerging world society.

129. ZWEIG, Michael. The Idea of a World University. Edited with a foreward by Harold Taylor. Carbondale: Southern Illinois University Press, 1967. 204 pp.

A thorough exploration of a recurring idea for an institution "which would match on an intellectual scale what the United Nations was designed to accomplish in a political dimension . . . a rough estimate would be that since the end of World War I, more than one thousand such proposals have been made." (Taylor in Foreward, pp. v-vi). Zweig explores the needs, alternatives (international exchanges, area study programs, etc.), the history of the proposal, and what needs to be done.

130. WOLFF, Robert Paul. The Ideal of the University. Boston: Beacon Press, 1969. 161 pp. $5.95.

A well-written essay responding to the events at Columbia and attempting to develop a program of practical reform of present-day institutions, based on the view that "the competition for scarce places at top colleges corrupts the secondary school education, and even corrodes primary education as well." After a discussion of 4 models (the university as A

Sanctuary of Scholarship, A Training Camp for the Professions, A Social Service Station, and An Assembly Line for Establishment Man), the final chapter proposes that "performance in high school must be made irrelevant to college admission and college performance must be made irrelevant to graduate and professional admission." (p. 142) Degrees would be abolished, including the Ph.D. and its questionable "contribution-to-knowledge" requirement, in turn freeing students for truly meaningful work. Professional training would be an alternative to undergraduate education, rather than a linear sequel to it, and undergraduate admissions would be by lot among those attaining some minimum performance.

131. AXELROD, Joseph, et. al. Search for Relevance: The Campus in Crisis. San Francisco: Jossey-Bass, 1969. 244 pp. Bib., pp. 212-237.

Tying together Nevitt Sanford's theory of student development, old ideals, and present student protest, four "total design" models are proposed: a cluster college on the campus of an urban college or university, a B.A. program in Future Studies, a community college, and an Experimental Freshman Year Program. Bibliography of about 400 items.

132. The Committee on the Student in Higher Education. The Student in Higher Education. New Haven, Conn.: The Hazen Foundation, January 1968. 66 pp.

"This report was written to bring attention to the possibility of developmental higher education . . . These recommendations call for a major qualitative change in planning for the future of higher education. The Committee has no quarrel with the computer experts, the technical planners, and the budgetary wizards who are telling us how many students, teachers, and classrooms we will need by 1980 . . . but it is not enough, for they are not concerned with the character of education. It takes another kind of planner to consider and envision the quality of human relationships in the college environment." (p. 57) Many recommendations such as the whole freshman year as an orientation to learning, a reduction of competition, a proliferation of experimentation, a reforming of physical structures, etc. Clearly written with a humane concern.

133. Educational Facilities Laboratories. Educational Change and Architectural Consequences. A Report on the Facilities for Individualized Instruction. N.Y.: EFL, 1968. 88 pp. Free.

In view of the new "spirit of innovation, experimentation, venturesomeness" four school designs are suggested (pre-primary, primary, middle, and secondary) "as a stimulus to open up the options in school design," in that "Too many of our schools still stand as handicaps to new programs and new thinking in education." (p. 85)

134. PATTERSON, Franklin and Charles R. LONGSWORTH. The Making of a College: Plans for a New Departure in Higher Education. Hampshire College, Working Paper No. 1. Cambridge: MIT Press, 1966. 364 pp. $4.95 paper.

Planning papers for a new liberal arts college in South Amherst, Massachusetts, which "defines an organized vision of liberal education for a new era . . . to help its students learn to live their adult lives fully and well in a society of intense change, immense opportunity, and great hazards."

135. GATTEGNO, Caleb. Towards a Visual Culture: Educating Through Television. N.Y.: Outerbridge & Dienstfrey, 1969. 117 pp. $4.95.

A serious essay of McLuhanesque proportions on the potentials of television in education: "a call to use television for what it can give, which is really tremendous and by most still unsuspected." (p. 4) ". . . only recently, through television, has (man) been able to shift from the clumsiness of speech . . . to the power of the dynamic, infinite visual expression . . . we can foresee the coming of an era where . . . we shall be able to share vast conscious experiences at once . . . The future is requiring that we learn to consider ever larger wholes in whatever social position we find ourselves . . . a visual culture is the answer to such a trend . . . sight is a far swifter means of experiencing and communicating than speech." (p. 5)

136. BERG, Ivar. Education and Jobs: The Great Training Robbery. Foreword by Eli Ginzberg. N.Y.: Praeger (published for the Center for Urban Education), 1970. 200 pp. $7.50.

A well-researched sociological study of the relationship of education to employment, pointing out that many workers are over-educated, employee productivity does not vary with formal education, job dissatisfaction increases as educational level rises, and that "educational credentials have become the new property in America." Of particular interest is evidence indicating that elementary and secondary teachers are less likely to stay in teaching as they move up the credentials ladder. Unfortunately, Berg only analyzes the single dimension of education and jobs, without suggesting other purposes (such as citizenship and individual development) that schools might satisfy. (Although there is no trend data or forecasts, and only a hint of policy suggestions, this book nevertheless has broad implications for policy and is therefore included here.)

137. BIENVENU, Bernard J. New Priorities in Training: A Guide for Industry. N.Y.: American Management Association, 1969. 207 pp. $10.50.

Argues that the bewildering rate of change demands that training become a continuous process, whereas at the present time, 9 out of 10 employee training programs are sporadic affairs. Advocates a "total training" process.

D. JOURNALS, BIBLIOGRAPHIES, ETC.

138. Papers of the International Future Research Conference, 1970. Kyoto, Japan: IFRC, Kyoto International Conference Hall, Takara-Ike, Sakyo-Ku, 1970. $31.50 + $4.00 postage for complete set of 65 papers. Papers may be ordered separately at 50 cents each. List available from IFRC.

The English language papers (to be subsequently published), are in 8 categories as follows:

1. The Role of Futures and Future Research (7 papers)
2. Research Methodology (7 papers)
3. Technological Innovations and Social Change (12 papers)
4. Education for the Future (11 papers)
5. Environmental Changes--Time and Space (8 papers)
6. New Values: New Man (7 papers)
7. Social Systems and Social Innovation (5 papers)
8. World Futures (8 papers)

139. Futures. The Journal of Forecasting and Planning. Guildford, Surrey, England: Iliffe Science and Technology Publications, Ltd. (32 High Street). $22.50 annually. (U. S. subscribers may order through Iliffe-NTP, Inc., 300 E. 42nd Street, New York, New York 10017).

Published quarterly since September 1968, quite valuable but overpriced. "Contains articles and original papers on the probable and possible long-term trends in science, technology, economics, politics, and social conditions, and on the means by which desirable goals may be selected and achieved." (Journal masthead) A serious publication with an international focus.

140. The Futurist. A Journal of Forecasts, Trends and Ideas About the Future. Washington: World Future Society (P.O. Box 19285, Twentieth Station, Washington, D.C. 20036). $7.50 annually.

Published bi-monthly since February 1967 and improving with each issue since its original inception as "A Newsletter for Tomorrow's World." Includes a variety of short articles, book reviews, speech extracts, as well as a member's book service offering a 10% discount on a list of about 60 books, most of them worthwhile. For an additional $10.00 per year, the WFS Supplemental Program offers current news on who is doing or writing what, and abstracts of recently published books. The first General Assembly of the World Future Society will be held May 11-14, 1971.

141. CALDWELL, Lynton K., assisted by William B. DEVILLE and Hedvah L. SHUCHMAN (eds.). Science, Technology, and Public Policy: A Selected and Annotated Bibliography (2 vols.). Prepared for the National Science Foundation by the Program in Public Policy for Science and Technology, Department of Government. Bloomington: Indiana University, revised edition, 1969. 492 pp. and 544 pp. respectively.

This massive and valuable reference work contains an estimated 5000 items, with annotations of varying length for each, and classified in 12 major sections and 46 sub-sections. "To provide a definitive treatment limited to publications in English for the years 1945-1967 would increase the size of the bibliography by at least half. The size might easily be doubled if relevant editorials and articles in news magazines and in popular journals were included." (Vol. II, p. i.)

142. WEBSTER, Maureen (Comp.), with the assistance of H. G. MEYERS, Don ADAMS, and Jerry MINER. Educational Planning and Policy: An International Bibliography. Syracuse: Educational Policy Research Center, June 1969. Working Draft, 654 pp.

Seeking to be comprehensive, international, and action-oriented, 4,927 items are included, largely written in the present decade. An elaborate categorization is provided, with indexes by author, country and region. The six major categories are titled Education and National Development, Comprehensive and Partial Planning, Financing Educational Plans, Influences on Plan Targets, Productivity and Efficiency, and Bibliographies.

143. ROJAS, Billy (Comp.). Future Studies Bibliography. Amherst, Mass.: University of Massachusetts, Program for the Study of the Future in Education, School of Education, January 1970. 107 pp., mimeo.

A listing of about 1500 items in 16 categories and 52 sub-categories. An updated version (Fall 1970?) will cite about 2000 items.

144. ROJAS, Billy (comp.). Future Studies Syllabus. Amherst, Mass.: University of Massachusetts, Program for the Study of the Future in Education, School of Education, revised edition, July 1970. 36 pp.

Outlines of 16 global and specialized futuristics courses presently being conducted at the college level.

145. MCHALE, John. Typological Survey of Futures Research in the U. S. Binghamton: State University of New York, Center for Integrative Studies, June 1970. 103 pp., mimeo.

A survey of the current state of futures research programs in the United States, conducted for the National Institute of Mental Health during the June 1969-June 1970 period, "in order to elicit a representative profile of such ongoing work, i.e. who is doing what, in which social sector, how it is being done and to which specific end(s)." (p. 1) Based on 135 usable returns (out of 356 letters sent out), McHale concludes that there are not more than 1000 full-time and less than 500 part-time workers in the field. (p. 19) Various charts and appendices list organizations, individuals, characteristics of the work, various definitions of futures research, communication needs, a discussion of the World Future Society, and informal change agencies that are actively creating alternative social arrangements. Although it is pointed out that this is not a directory or a social register of futurists, the study is nevertheless the best approximation for the time being.

Based on the returns (which undoubtedly characterize the mainstream), McHale concludes that the disciplines represented are heavily biased in the area of the physical sciences and engineering, which may tend "to push the overall developmental direction of the field towards 'professional respectability' and institutional propriety based on methodologies and models drawn from these areas . . . this direction if sustained may limit severely the 'look-out' and 'early-warning' capability of futures research." (p. 42) The age range concentration and sex ratio of the researchers also comes under criticism, and it is pointed out that "much of the work in this area is, indeed, tied closely to the traditional and largely unexamined premises for human action which are imbedded in our local ideological systems and value assumption. It is largely 'culture bound' in a period when one of the key aspects of ongoing change is the degree to which the more stereotyped socio-cultural premises . . . are undergoing considerable modification." (p. 43)

"One might conclude here that the potential contribution of futures research in the manifold service of the society is very great--but that present state of development, and the range of supported inquiry is not wholly conducive to the fullest use of that potential." (p. 45) (For an international characterization of technological forecasting only, see Jantsch, Item 7.)

146. MARIEN, Michael. Shaping the Future of American Education: An Annotated Bibliography of General and Educational Futures. Syracuse: Educational Policy Research Center, December 1970. About 250 pp.

Contains about 1000 items, nearly all books, and about two-thirds annotated in varying degrees. The format is roughly the same as in this selected bibliography. The larger bibliography contains a far greater number of prescriptive futures, as well as books that are "obsolete" in varying degrees, "non-future futures" that promise to say something about the future and do not, pre-World War II forecasts, "utopian" literature, and "pop futures"--drugstore literature of how-to-do-it astrology, optimistic forecasts of material splendors, apocolyptic forecasts of the Second Coming of Jesus, and rightist-tinged prophecies of spectacular events. (It is not fatuous to dwell on this latter category of "pop futures," for the readers of this simplistic literature doubtlessly outnumber those who follow the serious writers on the future. Indeed, one of the greatest challenges to professional futurists may be gaining wider acceptance of the complexities of emerging realities.)

E. Addenda

(During the hiatus of typing and reviewing, the following items have come to my attention and are felt to be worthy of brief mention.)

METHODOLOGY

1. MANNHEIM, Karl. Ideology and Utopia: An Introduction to the Sociology of Knowledge. New York: Harcourt, Brace, and World, 1968. 318 pp. (First published in 1936, this classic essay discusses various forms of the "utopian mentality".)

2. DE BONO, Edward. New Think: The Use of Lateral Thinking in the Generation of New Ideas. New York: Basic Books, 1968. 156 pp. $5.95. (Proposes lateral thinking as a complementary process to vertical thinking based on principles of mathematics, logic, and computers. Could well be considered necessary for thinking about alternative futures.)

TRENDS AND FUTURES

3. MILLER, S. M. and Pamela ROBY. The Future of Inequality. New York: Basic Books, 1970. 272 pp. $7.95. (Sees inequality increasing during the 1970's unless there is a radical restructuring of priorities.)

4. LUNDBERG, Ferdinand. The Coming World Transformation. Garden City, N.Y.: Doubleday, 1963. 395 pp. (A broad overview of social trends over the next 150 years, with major attention paid to learning needs and brainpower as a matter of national survival.)

NEW DIRECTIONS

5. GARDNER, John W. The Recovery of Confidence. New York: W. W. Norton, 1970. 189 pp. $5.00. (The background for Gardner's Common Cause, discussing leadership, dissent, individuality, hope, values, etc. in contemporary terms. Highly Recommended.)

6. REICH, Charles A. The Greening of America: How the Youth Revolution is Trying to Make America Livable. New York: Random House, 1970. 399 pp. $7.95. (Forecast and advocacy of the transition from the corporate state to "Consciousness III.")

7. FARBER, Jerry. The Student as Nigger: Essays and Stories. New York: Contact Books, Aug. 1969; Pocket Books, Sept. 1970. 142 pp. 95 cents. (Whether or not one is sympathetic, the well-known title essay should be read, as well as the other lucid essays written for students as policy-makers.)

8. POSTMAN, Neal. "Once Upon a Time--A Fable of Student Power," The New York Times Magazine, June 14, 1970, pp. 10-11. (A delightful mini-scenario of how the schools were closed during an official state of emergency, and everyone learned more and was happier for it. Why not?)

9. KILPATRICK, William Heard. Education for a Changing Civilization. Three Lectures Delivered on the Luther Laflin Kellogg Foundation at Rutgers University, 1926. New York: Macmillan, 1936. 143 pp. (Although nearly 50 years old, the prescriptions are not unlike many that are widely heard today, e.g.: preparing students for "an unknown future.")

10. SURC, Policy Institute. Disruption in Urban Public Secondary Schools. Syracuse: Syracuse University Research Corporation, Policy Institute (723 University Ave., Syracuse, N.Y. 13210), August 1970. 61 pp. + Appendices. (A broad survey of literature combined with 27 on-site visits and 683 usable questionnaires. Discusses size and nature of the problems, causes, and strategies for response.)

11. WESTIN, Allen F. et. al. Civic Education in a Crisis Age: An Alternative to Repression and Revolution. New York: Columbia University, Center for Research and Education in American Liberties, September 1970. 27 pp. (Finds that a large majority of nearly 7000 junior and senior high school students surveyed feel they are regularly subjected to undemocratic decisions, and proposes ten objectives for civic education.)

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Future Courses	Rojas - 144	16 syllabi
Technology and Public Policy	Caldwell - 141	5000, annotated
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Utopias	Armytage - 4 Weiss - 4	500 in notes 500 chronological, not annotated
Student Dissent	Lemburg Center - 90	70, annotated
New Curriculum Prescriptions	Berman - 122	600, not annotated

V. Closing the Feedback Loop

To:

Michael Marien
Educational Policy Research Center
1206 Harrison Street
Syracuse, New York 13210

From:

Name: _____

Title or
Function _____

Address: _____

_____

_____

1. What "Essential Reading" would you recommend adding to the bibliography? (Reasons would be helpful)

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2. Which items should be deleted from the bibliography?

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3. How could this bibliography be better designed to serve your interests?

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4. Additional criticisms, suggestions, observations . . .

_____

_____

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(x) _____ Please send a copy of the full bibliography (Item 146) when available. (Due to limited production capacity, please request only if more than casually interested.)

THANK YOU!